

Railway Age

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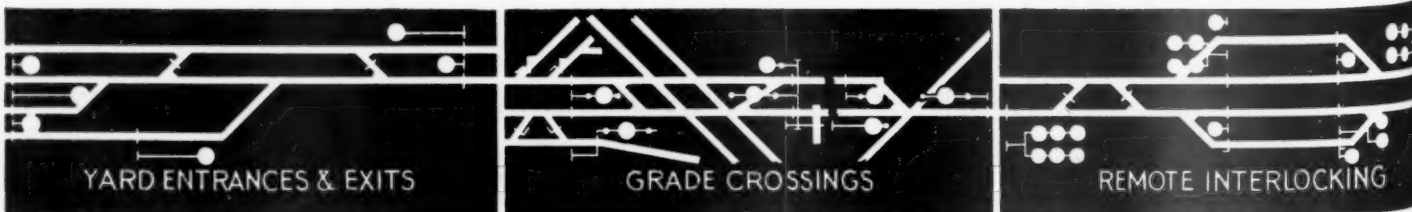
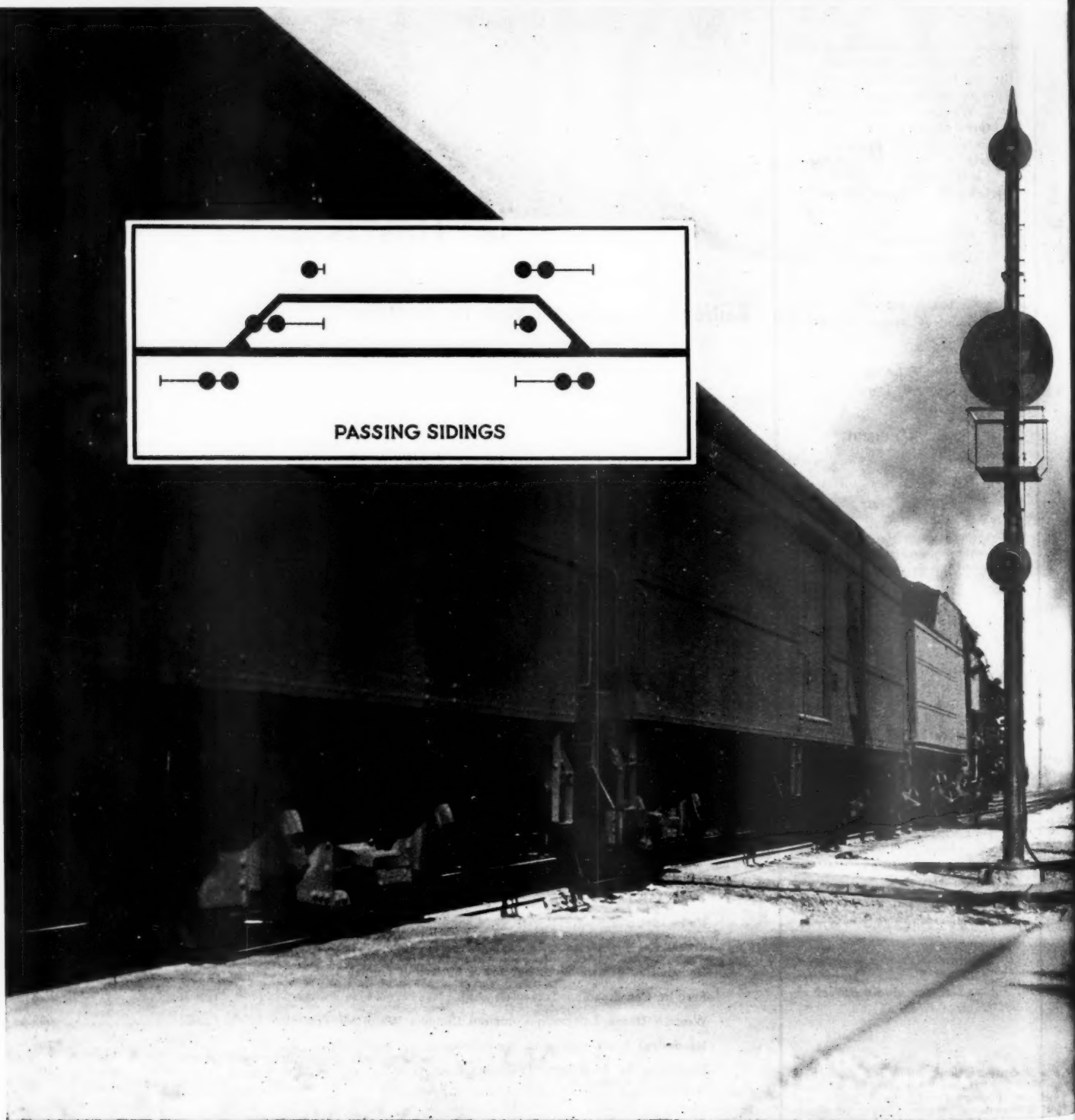
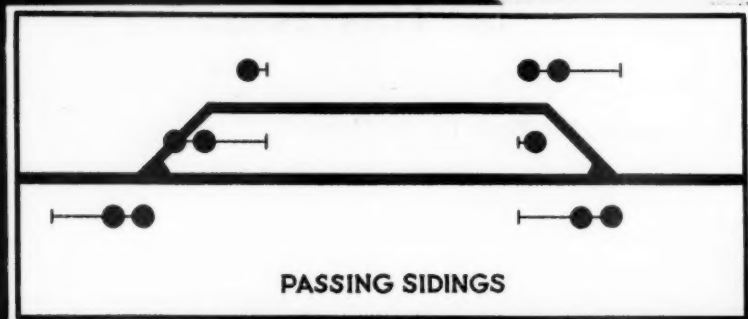
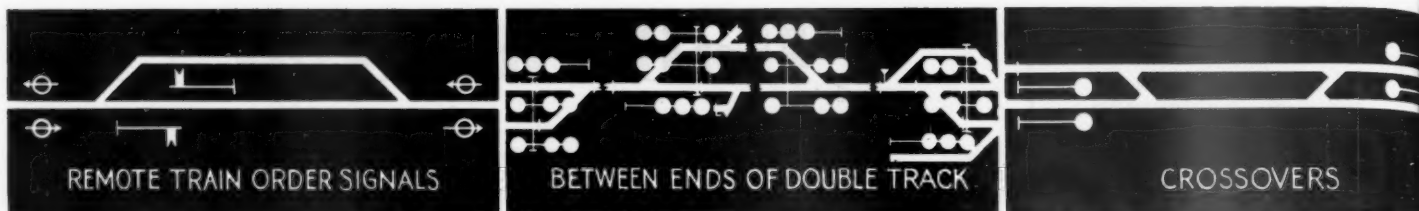
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President Roosevelt's Railway Policy and Railway Wages

President Roosevelt on May 4 sent to Congress a message on the railroad situation with which he transmitted a bill providing for enactment of the measures he believes should be adopted to deal with the present railway emergency, and on the same day made an address before the Chamber of Commerce of the United States in which he asked his hearers "who represent, in all probability," he said, "the majority of the employers of the nation, to refrain from further reduction in the wages of your employees and * * * to increase your wage scale in conformity with and simultaneous with the rise of the level of commodity prices in so far as this lies within your power."

There is little in the President's railroad message or the bill he transmitted with it that had not been fully anticipated in the *Railway Age* and in the press generally. They principally ask and provide for repeal of the rate-making provisions of the Transportation act, especially the recapture provisions, the placing of railway holding companies under the regulation of the Interstate Commerce Commission, and the creation of a federal coordinator of transportation, "who," as President Roosevelt said, "working with groups of railroads, will be able to encourage, promote or require action on the part of carriers in order to avoid duplication of service, prevent waste and encourage financial reorganizations." The coordinator, the President added, "should also, in carrying out this policy, render useful service in maintaining railroad employment at a fair wage". This reference to wages in the President's message, together with what he said about wages in his Chamber of Commerce address on the same day, call for careful consideration of what will be the authority and responsibility of railway managements after the emergency legislation recommended by the President has been enacted.

Initiative Still With Railway Managements

There can be no reasonable objection to any of the provisions of the bill upon the ground that it would hamper railway management. By the repeal of the recapture provisions the railways will gain something, and they probably will not lose anything by the repeal of the rate-making provisions because the Interstate Commerce Commission always has regulated rates in accordance with its own views, largely regardless of

the law, and it probably always will do so as long as it has the power to regulate rates at all. Creation of a federal coordinator will result in economies through reduction of real duplications of facilities and service, and help to stop criticisms of so-called "duplications" which cannot be eliminated without depriving the public of service that it demands and needs. As the bill provides for the division of the railways into eastern, southern and western groups, and the creation of committees by the railways of these three groups to cooperate with the federal coordinator in accomplishing the purposes for which he is to be created, it leaves a large measure of initiative to the railway managements.

The federal coordinator is directed to provide means whereby committees representing railway labor organizations shall be advised regarding any contemplated orders requiring changes which will affect the interests of employees, and to confer with such committees before issuing such orders; and the bill also provides that "nothing herein shall be construed to repeal, amend, suspend or modify any of the requirements of the Railway Labor act, or the duties and obligations imposed thereon or toward contracts entered into in accordance with the provisions of said act." While the bill gives the federal coordinator authority to compel the adoption of changes in service which will effect economies, it in other respects apparently leaves the same authority, and therefore the same responsibility, to the managements of the railways that they have heretofore possessed. It follows that it still remains, as heretofore, their duty to use fully and courageously their expert knowledge, their best judgment and their ability to pilot the railway industry safely through the present storm and back to prosperity.

Railway Wages and Cost of Living

In view of these facts, what attitude should railway managements take toward President Roosevelt's appeal to employers in his Chamber of Commerce address to refrain from further reductions of wages and to increase them as developments make practicable? Railway managements must soon answer this question if they are formally to propose, on June 15, as heretofore contemplated, a plan for reduction of wages. "It is a simple fact," said President Roosevelt, "that the average of the wage scale of the nation has gone down

during the last four years more rapidly than the cost of living. It is essential as a matter of national justice that the wage scales should be brought back to meet the cost of living, and that this process should begin now and not later." Whatever may be true as to other industries, it is not a fact that wages in the railroad industry have declined relatively more during the depression than the cost of living. The average cost of living in 1932 was 22 per cent less than in 1929; the average annual compensation of railway employees—who worked fewer hours in 1932 than in 1929—was 16 per cent less, and the average hourly wage, which measures the cost of labor to the railways, was only 5 per cent less. In other words, the average railway employee who still had a job in 1932 worked fewer hours than in 1929, and received pay which would buy more than his 1929 pay, and therefore had been benefited rather than injured by the depression.

As compared with the pre-war year 1913, the cost of living in 1932 showed an increase of 34 per cent and the average annual compensation of railway employees an increase of 93 per cent; and since the war working hours on the railways have been changed from a ten-hour to an eight-hour basis. After the great increases in both of them that occurred during and following the war, the cost of living and the wages of railway employees were reestablished on new bases in 1923. In 1932 the cost of living was 22 per cent less than in 1923, while average annual earnings per railway employee were only about 9.3 per cent less, and the average hourly wage was actually higher.

Responsibility of Railway Managements

In view of the easily demonstrable fact that the general statements made by President Roosevelt regarding the comparative declines that have occurred during the depression in wages and the cost of living are not true as to railway wages, it would appear that his appeal for the maintenance of wages could not reasonably be considered as having been addressed to railway managements. Furthermore, railway managements have made a record of both complying and not complying with views expressed by high government officials the results of which indicate that it is not safe for them to allow their own judgment as to the policies to be followed to be over-ridden by the views of those who have no special responsibility for railway results.

They declined in 1922, with good results, to act in accordance with a suggestion from the Harding administration that they should all take back the striking shop employees with their full seniority rights. They adopted three and one-half years ago a policy of maintaining wages because it was suggested by President Hoover and backed by the influence of his administration, for which they have never received the thanks or applause of anybody, and which has had the three-fold results of helping to bring the railways to the verge of bankruptcy, of leaving their operating costs relatively excessive as compared with the prices of commodities, and of getting their managements criticized for not

making the readjustments demanded by new conditions.

Experience has very clearly indicated the expediency of railway managements co-operating with governments, their employees, other industries and the public as closely as is reasonably practicable, but, at the same time, acting courageously in accordance with their own best judgment as to what it is best for the railroads themselves and for the public that the railroads should do. Railway managements would have been criticized three years ago if they had sought reductions of wages in spite of the request made by President Hoover, but they are being criticized now because they have not made reductions of rates that greater reductions of operating costs alone would have rendered practicable, and, in addition, the railways are broke. They should give full consideration to the views expressed by President Roosevelt, but they have the responsibility for railway results, and therefore should determine in accordance with their own judgment whether they should serve notices of reductions of wages on June 15, and for what amount. The policy of inflation being entered upon may greatly change present conditions, but action should be taken in accordance with these conditions unless and until they are changed.

Wage Reductions Not Necessarily Permanent

There can be no solution of existing economic problems which does not include balancing the budgets of business. Railroadage is a business, and there can be no solution of the railroad problem which does not include balancing the budget of the railroad industry by making its gross earnings exceed its operating expenses, taxes and fixed charges. In 1932 and in the first one-third of 1933 the railroad budget was completely unbalanced because operating expenses, taxes and fixed charges exceeded earnings. The most desirable way to balance the railroad budget would be to cause a large increase in traffic and gross earnings, and since the banking moratorium traffic and earnings have been increasing, the average number of cars loaded weekly with freight having been the largest in April that it has been since last November, and loadings in the week ended April 29 having been only about three per cent less than in the corresponding week of April, 1932. There are good reasons for believing traffic will continue to increase, but it is also a fact that the railways are confronted with demands for reductions of rates which would tend to reduce earnings. The federal coordinator is to be created to help balance the railway budget by lawfully enabling, and even compelling, the railways to make reductions of service that will reduce operating expenses. The reduction of railway wages is as justifiable a means of curtailing operating expenses as the reductions of service that are to be made under the supervision of the federal coordinator.

Neither wage advances nor reductions should ever be regarded as permanent. If commodity prices so advance as to reduce the pressure for reductions of railway rates; if wage reductions are stopped and increases are begun in other industries; if general business, rail-

way traffic and railway earnings increase to a normal basis, then there will be a justification for withdrawing reductions of railway wages made because of the depressed condition of the railroad industry. The one great essential to the restoration of prosperity, however, is the restoration of a parity of purchasing power between all large industries and classes of producers, in order that there may be a restoration of production of all kinds to a normal volume; and readjustment of the wages of railway employees in line with the incomes and wages of other classes is one of the readjustments that must be made to cause the railways and their employees to contribute their share toward recovery.

Unemployment Relief Or Truck Subsidy—Which?

If an instance in New York is at all typical, railroad men will do well to scan carefully all projects for unemployment relief in their localities for which loans are being sought from the Reconstruction Finance Corporation. This project, known as the Pelham-Port Chester Parkway, parades as a scheme for the relief of unemployment, whereas, it appears, its main effect would be to donate many millions of the taxpayers' money to the cause of truck transportation.

Westchester county, New York, is permeated by a network of motor parkways of which its inhabitants are justifiably proud. Broad avenues lined on either side by spacious lawns, shrubbery and trees, these motor ways have unquestionably added to the amenities of life. Commercial traffic, naturally, is barred from the parkways, which is a principal source of their charm and explains why they have, on the whole, added to property values in the county.

The county some years ago acquired, for upwards of \$5,000,000, a right-of-way for another "parkway," extending from Pelham, at the New York City line, some 13 miles to the Connecticut state line at Port Chester, paralleling the Boston post road, the main artery leading from New York into New England. Instead of developing this right-of-way as a legitimate parkway, however, the county authorities are seeking a loan of \$13,500,000 from the Reconstruction Finance Corporation to develop it as a high speed highway for trucks and all other classes of traffic. To make it appear as a self-liquidating project, they propose to levy a toll of 25 cents per vehicle.

If the loan is granted it will be secured by the road only and not the land upon which the paving is laid. To pay interest and amortization on the R. F. C. loan, approximately \$1,000,000 annually will be required. Moreover, county taxpayers will pay approximately \$200,000 a year for maintenance, policing, repairs and overhead, in addition to interest and sinking fund requirements on the \$5,000,000 right-of-way already acquired by the county.

Opponents of the project declare that tolls on through truck traffic which will likely use the road will not yield more than one-fourth the amount needed to pay interest upon and retire the loan from the R. F. C. and that pleasure vehicles are likely to avoid a toll-road frequented by trucks. In that event receivership would follow and Uncle Sam might see his \$13,000,000 investment go under the hammer at a fraction of the cost, with tolls reduced to even less than 25 cents in order to attract more traffic, or entirely abolished, in case the state or county should take over the road and dedicate it to the public—that is to say, the trucking interests. The truck operators would then have at their service a facility in which Westchester taxpayers had sunk over \$5,000,000 and federal taxpayers an even greater sum, for a very modest contribution, if any, which would save them from thirty minutes to an hour in entering and leaving New York.

The owners of abutting property, instead of having their values maintained by their proximity to a beautiful parkway, could count confidently on the diminution in values which a truck highway brings to all near-by property. The commuting population would continue to complain at the New Haven's fares, not stopping to consider that if they would be as liberal as taxpayers with the railroads as they are with their competitors, the railroads would gladly carry them for a fraction of present charges. If truck transportation enthusiasts can succeed in getting acceptance of the Pelham-Port Chester project, then we may expect a flood of similar plans all over the country, since it is about as neat a plan for extracting millions from the taxpayers as has yet appeared.

Electrification of Steam Railroads

The report on Electrification of Steam Railroads, prepared by the Railway Electrification Committee of the National Electric Light Association, is now available. It should have been released the latter part of 1932, but because of the absorption of the N. E. L. A. by the Edison Electric Institute, it has only just been published by the Liquidating Committee of the N. E. L. A. As continued from year to year, it is both the most comprehensive and most complete report on railroad electrification. It covers all installations in the world and brings up to date each year, or each second year, detailed tabular matter covering trackage electrified and equipment placed in service. Numerous other features are included in these reports and those who are vitally interested in the subject of railroad electrification consider it one of their most valuable documents. The Edison Electric Institute may continue to issue this report, but no decision has yet been reached. It would be unfortunate if it were found necessary to discontinue it. Much painstaking effort has been devoted to developing sources of information; and if its quality can be maintained it promises to become increasingly valuable as the use of electric traction is extended.

Railroad Co-ordinator Not To Be Czar

President Roosevelt's Emergency Transportation Act intended
to help the railroads help themselves

WASHINGTON, D. C.

ALTHOUGH President Roosevelt has found himself not yet ready to recommend a comprehensive plan for permanent transportation legislation, and although this means that consideration of most of the comprehensive plan developed by the Association of Railway Executives will have to await a more favorable opportunity, the provisions of his "Emergency Railroad Transportation Act, 1933" as introduced in Congress on May 4, cover a lot of territory that has served as a battleground for many years, in addition to the new temporary plan for the appointment of a Federal Co-ordinator of Transportation. They are also designed to provide teeth for the recently enacted amendment to the bankruptcy laws by directing the Interstate Commerce Commission to use its power to grant or withhold approval of government loans or railroad bond issues in such a way as to force financial reorganizations of many railroads, although the extent of such reorganization process may depend on the results of the government's inflation policy.

The bill was formally introduced on May 4 in the House as H.R. 5500 by Chairman Rayburn of the House committee on interstate and foreign commerce, which had previously after many hearings reported the recapture and holding company bills which were finally incorporated in the coordinator bill recommended by the President. It was introduced in the Senate as S. 1580 by Senator Robinson, the majority leader, instead of by Senator Dill, chairman of the Senate committee on interstate commerce, as had been expected. The coordinator and reorganization plan was stated as Title I—Emergency Powers, of the new bill, while the earlier bills, H.R. 3754 and 4222, were included as Title II—Amendments to Interstate Commerce Act, and given new section numbers.

This week the newer features of the bill have been running the gauntlet of explanation and criticism before members of Congress at hearings begun on Monday before the House committee and on Tuesday before the Senate committee, at which Secretary Roper, Dr. Splawn, and Commissioner Eastman, of the committee which drafted the bill, explained its features. They were to be followed by representatives of the railroad labor organizations in opposition to the bill and of the National Industrial Traffic League, which proposed to ask for certain changes in it. Representatives of the railroad executives were also to be given an opportunity to express their views.

Purpose to Prevent Cut-throat Competition

In his radio address Sunday evening President Roosevelt said the railroad bill falls into the same class with other proposals intended, among other things, to "prevent cut-throat competition" and "encourage each industry to prevent overproduction," because "it seeks to provide and make definite planning by the railroads themselves, with the assistance of the government, to eliminate the duplication and waste that is now resulting in railroad receiverships and continuing operating deficits." "We found ourselves," he said, "with more facilities to transport goods than there were goods and crops to

be transported. All of this has been caused in large part by a complete lack of planning and a complete failure to understand the danger signals that have been flying ever since the close of the World War. . . . It is wholly wrong to call the measures that we have taken government control of farming, control of industry, and control of transportation. It is rather a partnership between government and farming and industry and transportation; not partnership in profits, for the profits would still go to the citizens, but rather a partnership in planning and partnership to see that the plans are carried out."

The bill as made public on May 4 contains one important change and several other modifications designed to improve the language and form as compared with an earlier tentative draft which had been confidentially circulated and was printed in some newspapers. The verbal changes were made before the final draft was submitted to the President by the committee which was handling the bill for him but it is understood that the language in Section 4 of the bill stating as one of the purposes of the act the avoidance of "unreasonable disturbance of rates by individual carriers" was made in a late revision to meet the opposition of shippers. This removes from the coordinator any power over rates except those for accessorial services. The earlier draft had also stated as one of the purposes to control allowances, accessorial services, "including owned or partly owned air lines, bus lines, or trucks," and other practices affecting service or operation, but the quoted words were eliminated.

The President in his message to Congress had referred to the encouragement of financial reorganization as one of the duties of the coordinator but the bill does not list that phase of the purposes of the bill as among his functions and leaves the power in that respect with the Interstate Commerce Commission.

Fair Return Rule to Be Scrapped

Passage of the bill would mark the official recognition by Congress of the break-down of the experiment in railway rate regulation undertaken in 1920 under which it was proposed to keep railroad revenues at a level which would yield to the carriers as a whole a fair return on the fair value of the property used for carrier purposes and to recapture half the excess over 6 per cent earned by any individual railroad system in any year. It would also scrap several hundred proceedings for the ascertainment of recapturable net railway operating income now pending before the commission, from which, although only 19 final reports have been issued, the commission's organization has roughly estimated that 422 railroads in some of the years since 1920 have earned about \$352,000,000 of recapturable excess, although the roads as a whole had fallen short of a fair return by several billions before the depression began.

Motor Regulation Postponed

While the President said that "our broad problem is so to coordinate all agencies of transportation to maintain adequate service" and had previously indicated a belief that motor transportation should be regulated by the

federal government, that problem is again postponed to another session of Congress, as it has been several times before, and will be one of the subjects to be studied by the coordinator.

First among his recommendations for the emergency bill the President named repeal of the recapture provisions of Section 15a of the interstate commerce act. Many have almost forgotten that the Rayburn bill for this purpose, which was already on the House calendar, also repeals in Section 205 of the new bill the provision for a percentage of fair return on railroad valuation. Because valuation is to be no longer used, even theoretically, as a basis for rate-making or recapture, the same bill also provides in Section 208 for a gradual wind-up of the commission's valuation work by stating that upon completion of the original valuations the commission hereafter shall keep itself informed of railroad property changes so that it would have information upon which to make up some kind of revised valuation when deemed necessary. In recognition of this proposal for a tapering off of the work on which the commission has been engaged for nearly 19 years, at a cost to the government of about \$45,000,000 and to the railroads of several times that sum, Congress proposes to cut the appropriation for valuation work to \$1,000,000 for the next fiscal year and a reorganization plan on the President's desk proposes to abolish the valuation bureau.

The new flexible rate-making rule would amend Section 15a to read as follows:

New Rate-Making Rule

"In the exercise of its power to prescribe just and reasonable rates the commission shall give due consideration, among other factors, to the effect of rates on the movement of traffic; to the need, in the public interest, of adequate and efficient railway transportation service at the lowest cost consistent with the furnishing of such service; and to the need of revenue sufficient to enable the carriers, under honest, economical, and efficient management, to provide such service."

In other words freight rates are to be made hereafter more with relation to what the traffic will bear than to any particular standard of profit and for a time those railroads will be regarded as especially fortunate that succeed in earning out of them enough to pay operating expenses, taxes and fixed charges without borrowing. Those that cannot do this are expected to reorganize and reduce the fixed charges. During the earlier consideration of the substitute rule the commission had indicated that it considered it important that it include specific recognition of the principle that inasmuch as railroad earnings must inevitably fall below normal in times of depression they may properly be permitted to rise above normal in times of prosperity. Earlier drafts of the bill had contained such a declaration but it was not in the bill as reported, possibly on the theory that it is a little early to legislate for prosperity.

Sections 201 to 204 contain the proposed amendments to the consolidation provisions in Section 5 of the interstate commerce act which had been recommended by the Interstate Commerce Commission to extend its jurisdiction over all acquisitions of control of railroads by holding company or otherwise, and to place holding companies that may be authorized to acquire control of carriers under regulation by the commission as to their accounts and security issues. Most of the acquisitions by holding companies which led to the agitation for such an amendment have since been approved in a general way in the commission's consolidation plan.

Secretary Roper of the Department of Commerce,

testifying before the House committee on May 8, said the co-ordinator plan had been developed from one suggested by the railway executives' committee, while the government committee was giving consideration to the consolidation plan put forward by Frederick H. Prince, but that the railroad draft of the bill was rejected because it proposed to place too much authority of government in a group of railroad executives, as well as for other reasons. It has been understood, however, that the railroads did not suggest their draft of a co-ordinator plan until after the idea had first been suggested by representatives of the President.

The bill is not offered as a solution of all transportation problems, Secretary Roper said, "It is really an answer to the plea of railway management to be permitted to work out their own salvation or at least to be granted a reasonable time within which to do so under governmental guidance.

"The purpose of the bill is to assist the railroads to help themselves and is essentially experimental. The mechanics of operation consist of regional co-ordinating committees, with whom a federal officer called a co-ordinator will co-operate for a period of not more than two years. This co-ordinator is to divide the roads of the country into three general regions and maintain contacts with the roads of each region through committees of five members for each region. These committees are to be selected by the roads themselves; the right of selection being based on road mileage. Labor organizations are not represented on the regional co-ordinating committees, but they are safeguarded in their rights of collective bargaining and all the rights they now have under State and Federal laws are preserved to them."

A comprehensive statement as to the purposes of the bill and the manner in which it may work out was presented before the Senate committee on Tuesday by Commissioner Joseph B. Eastman, in part as follows:

Commissioner Eastman Outlines Purposes of Bill

The railroads of the country, like every other industry, are suffering acutely from present economic conditions, and in the case of the railroads this suffering is aggravated by the serious and rapidly increasing competition from other transportation agencies. These railroad ills are the reason for this bill. It is not offered as a cure-all. It provides for a definite course of treatment which it is hoped and expected will afford some measure of relief, and it also places the patient under special observation for purposes of further diagnosis and the early prescription, if found necessary, of other and perhaps more radical treatment.

Competition between railroads has been encouraged. It has been put under some restraint through public regulation to reduce the instability and gross discriminations which it was found to produce in the absence of such restraint; but competition has never been abandoned as an underlying principle. One very important evil of competition has not been seriously attacked. I refer to its duplications and wastes and unnecessary costs. There has been a growing realization that along with its advantages it has these grave disadvantages, and that realization was reflected to some slight extent in the Transportation Act, 1920.

The thought behind this part of the bill is that many of the wastes of competition can be eliminated or reduced without consolidation or merger of companies and without complete suppression of competition, through co-operation of the railroads encouraged or impelled by the government. What the wastes amount to in the aggregate and how much they can be reduced by the means provided in the bill, no one knows. As illustrations of matters which come within the range of the bill, I mention the following:

Illustrative Examples

Unnecessary duplications of service or facilities, including

The wastes which exist at large railroad centers and which could be eliminated by joint use of terminals, both freight and passenger, and the lines and facilities incident thereto.

Unnecessary passenger or freight train service, such as could be eliminated by pooling arrangements.

Use of unduly circuitous routes.

Extravagance in solicitation of traffic.

Waste in equipment repair expense, such as could be avoided by joint use of certain shops and abandonment of others.

Waste in passenger ticket offices, such as could be avoided by combined ticket offices.

Unnecessary allowances to large shippers for certain services.

Unduly low charges for warehousing and like accessorial services.

Waste in the use of equipment such as might be avoided by pooling arrangements, change in car rentals, or other means of reducing empty return movement of cars.

Wasteful practices in the purchase of equipment, rails, ties, materials and supplies, including not only purchasing methods but also standardization and specifications.

Reduction of unprofitable operations and provision of better service by the substitution of motor vehicles for steam service and their use as auxiliaries in terminal service.

Wasteful practices in the payment of loss and damage claims.

Wasteful practices with respect to freight-forwarding companies and improvements in their use.

Waste in the handling of less-than-carload freight, such as can be reduced by railroad cooperation.

Wasteful practices in the operation of unnecessary parallel motor-bus or motor-truck services.

Wasteful policies with respect to rates, and consideration of general plans to adjust freight-rate structures to modern needs.

Research into practical use of cost accounting.

I mention these merely as prospects. Some may not pan out. Others may yield more gold than is expected. Many others could be mentioned.

Section 2 provides for a federal co-ordinator of transportation to be appointed by the President with the advice and consent of the Senate or designated by him from the membership of the commission. . . . Thereafter, three Regional Co-ordinating Committees shall be created, one for each group, and each consisting of not more than five members. They are to be designated, respectively, by the carriers in each group in a manner provided by the act, and will be agencies of the carriers and not of the government.

Section 5 makes it the duty of the committees to carry out the particular purposes of the bill which I have already described, so far as such action can be voluntarily accomplished by the carriers. In such instances as the committees are unable, for any reason, legal or otherwise, to carry out the purposes by such voluntary action, they are to recommend to the co-ordinator that he give appropriate directions to the carriers by order; and the co-ordinator is authorized and directed to issue and enforce such orders if he finds them to be consistent with the public interest and in furtherance of the purposes of the act. The obstacle to voluntary action by the committees might be the prohibitions of an anti-trust statute or some other statute or order, federal or state; or it might be inability to secure the consent of all of the necessary carriers. This is the meaning of the words "for any reason, legal or otherwise."

Section 6 directs the co-ordinator to confer freely with the committees and give them the benefit of his advice and assistance. If, in any instance, a committee fails to act on any matter which the co-ordinator has brought to its attention and upon which he believes it should act, he is then authorized and directed to issue and enforce such orders, giving appropriate directions to the carriers with respect to such matter, as he finds to be consistent with the public interest.

Section 7 directs the co-ordinator to provide means whereby such central committees as may be selected by and represent railway labor organizations in each of the groups shall be advised of any contemplated orders requiring changes in service or operation which will affect the interests of the employees; and instructs him to confer freely with such committees before issuing any such order.

Section 8 provides that any order issued by the co-ordinator shall remain in effect until it is vacated by him or suspended or set aside by the commission; and it also provides that such order may include provision for the creation and administration of such just pooling arrangements or for such just compensation as he may deem necessary or desirable and in furtherance of the purposes of the act.

Section 9 gives the commission a full right of review, upon petition of any interested party, whether carrier, shipper or employee, over any order issued by the co-ordinator. . . . Review by the commission is to include a public hearing, but if the order is suspended, the hearing and decision are to be expedited as much as possible. After hearing, the commission may confirm the order or set it aside or reissue it in modified form.

Section 10 provides that the carriers affected by any order of the co-ordinator or commission shall, so long as such order is in effect, be relieved from the operation of the so-called "anti-trust laws" and of all other restraints or prohibitions by law, state or federal, other than such as are for the protection of the public health or safety, insofar as may be necessary to enable them to do anything authorized or required by such order. This is subject to the proviso that the act shall not be construed to

repeal, amend, suspend, or modify any of the requirements of the Railway Labor Act or the duties and obligations imposed thereunder or through contracts entered into in accordance with the provisions of said act.

Co-ordinator in No Sense a Czar

It will be seen from this summary that the co-ordinator is in no sense to be a Czar of the railroads. He is to be an administrative officer of the government whose principal duty shall be to aid and promote and, if necessary, require the co-operation on the part of the carriers which it is believed the emergency demands and which it is difficult, if not impossible, for these companies with their jealousies and intense rivalries and individual interests and present legal inhibitions to accomplish without outside, disinterested help and the aid of the government. The co-ordinator is given power, appropriate to the emergency, to act without the long delays of judicial procedure. On the other hand, in view of the fact that the orders of the co-ordinator may override the prohibitions and restraints of many existing laws, the bill recognizes the need for any opportunity of review, after public hearing, by a public body experienced in these matters and knowing the reasons for these laws. This is essential, not only in the general public interest, but from a legal standpoint, for property rights will be involved, and if there is no opportunity for a review of the facts by the commission, such an opportunity will be afforded by the courts. From this standpoint, the co-ordinator assumes the role, not of a Czar, but of a glorified examiner of the commission. Nevertheless he will have powers and facilities and opportunities which are not given to any representative of the commission under the present law.

Results Problematical and Dependent Largely on Carriers

Reasonably quick and important results from this part of the bill will depend largely upon the co-operation of the carriers. If they are disposed to impede and obstruct, the opportunities in that direction are great and hope of early accomplishments may as well be abandoned. My own belief is that they will co-operate, perhaps not 100 per cent but in very large measure. I base this belief on their financial straits, the difficulties which lie ahead of them, even if better times return, and their fear of more radical steps toward the improvement of transportation conditions. But even with their co-operation, the results are problematical.

Some Loss of Employment Involved

Upon one point there should be no misunderstanding on the part of Congress. To a very considerable extent the elimination or reduction of wastes will involve loss of employment to railroad labor. And any plan for alleviating this situation by retirement allowances or pensions or any similar scheme will to that extent prevent realization of the savings.

The welfare of the people of the country is the essential thing. Industries are of importance only as a means to that end. The problem of unemployment is the fundamental problem which the country must deal with and solve, if ruin is to be averted. Nevertheless, it seems to me an unsound conclusion that employment should be preserved by retaining waste and inefficiency. This is particularly true of the railroads. They are threatened not only by present economic conditions but by severe competition from other transportation agencies. Their future contribution to their own and the public welfare is dependent upon their ability to operate with the least possible burden of waste. In many instances they will need to reduce their rates. From a long-range standpoint, certainly, avoidance of wastes is in the interest of their employees, for it will tend to remove a threat to fair wages and working conditions.

Elimination of Grade Crossings Suggested

Clearly the government must move in the direction of the elimination of unemployment. I hope to see an attack of this character made along a wide front, and apparently one is about to begin. A public works program might well include widespread elimination of railroad grade crossings at public expense. I would be happy if a practicable plan could be proposed whereby funds could be supplied for the making up of deferred railroad maintenance, now amounting to probably more than one billion dollars. But it can hardly be that the solution lies in the direction of retaining work which in the final analysis is lost motion and adds to the handicap of the railroads in promoting freedom of trade and commercial intercourse.

I. C. C. To Deal with Financial Reorganization

The immediate treatment of railroad ills provided for in the bill includes one further thing. I refer to the second purpose, stated in section 4, namely "to promote financial reorganization of the carriers, with due regard to legal rights, so as to reduce fixed charges to the extent required by the public interest and

improve carrier credit." Here the responsibility is not placed upon the co-ordinator but upon the commission, and this is done by section 14. There are only two ways in which such obligations can be reduced. One is by consent of the creditors, and the other is through action of the courts in equity receivership or bankruptcy proceedings.

Consent of the creditors, considering the vast number of railroad creditors, is ordinarily an impracticable thing to secure. The other method comes automatically into play when once there is a default. The only way in which the government can hasten the process is by withholding aid which would prevent a default. Section 14 is so designed. It provides that the commission shall not approve a loan to a carrier under the Reconstruction Finance Corporation Act, nor shall it authorize a carrier to issue bonds or other evidences of indebtedness under the Interstate Commerce Act, as amended, unless it shall find that the financial structure of the carrier is such that there is reasonable prospect that such carrier can without financial reorganization survive the existing economic depression and provide for its capital needs thereafter.

The section places a heavy load upon the commission, for it is required to make a judgment with respect to the future which it will be very difficult to make.

Financial Difficulties Not Confined to the Over-Capitalized Railroads

There seems to be some misunderstanding in regard to railroad capitalization in general. Taking the roads in the aggregate, the commission's figures indicate that the net outstanding capitalization in bonds and stock is less than the amount of money actually invested in the properties. This is not true, of course, of various individual roads. However, some of those which are in grave financial difficulties at the present time are among those which are conservatively capitalized and among those, also, which have not wasted their substance in riotous living, i.e., in purchases of stocks of other companies at inflated prices.

It is also well to bear in mind that reduction of fixed charges is not a thing which can be accomplished overnight by a wave of a government wand.

More Radical Treatment May Be Necessary

I come now and finally to the second portion of the bill, which provides for further observation and diagnosis of railroad ills and the prescription, if found necessary, of further and perhaps more radical treatment.

The accomplishment of this purpose is covered by section 12 which authorizes and directs the co-ordinator forthwith to investigate and consider means, not provided for in the act, "of improving transportation conditions throughout the country, including the ability, financial or otherwise, of the carriers to improve their properties and furnish service and charge rates which will promote the commerce and industry of the country and including, also, the stability of railroad labor employment and other improvement of railroad labor conditions." From time to time the co-ordinator is to submit to the commission such recommendations calling for further legislation to these ends as he may deem necessary or desirable in the public interest; and the commission is to transmit these recommendations, together with its comments thereon, to the President and to the Congress.

Personally I regard this portion of the bill as perhaps the most important of all. New transportation agencies have appeared on the scene in great force. It is a period of strife, confusion and instability. The proper place for each of these agencies must be found and in some way they must be co-ordinated and welded into a well-knit whole, into a transportation system operating much more nearly as a unit without cross purposes and all manner of lost motion. It seems probable that to bring about such a result the railroads must not only operate with maximum efficiency and economy but must also change their methods of operation and service and their types of equipment in important respects and utilize motor vehicles and perhaps water and air carriers as auxiliaries to a much greater extent than at present. They must also change their rate structures.

The credit of the railroads, and indeed of all the transportation agencies, lies at the very heart of the problem, for new capital will certainly be needed.

Elaborate plans have been proposed to remedy these conditions. The National Transportation Committee has made a thorough study and important contributions. So has the commission. The so-called Prince plan, a very radical project on which much intelligent work has been done, has its advocates. The so-called Amster plan of complete railroad unification has been proposed. All of these plans presuppose the continuance of private ownership and operation. On the other hand, plans of government ownership and operation have many advocates.

who appear to be increasing in number. Between the two ideas, many adjustments or compromises are possible under which the railroads would become a mixed private and public undertaking.

None of these plans, in my judgment, has yet been adequately studied or worked out for practical application. This bill has the merit that it makes such work the definite duty of an officer of the government and equips him with funds and facilities for that purpose.

The co-ordinator should of course approach these questions with an open mind and divest himself, so far as possible, from the bias of pre-conceived notions.

Dealing with Rates

Commissioner Eastman also said before the Senate committee that the bill does not and ought not give the co-ordinator power to deal with rates but that there are matters connected with rates as to which the co-ordinator might set in motion machinery for the consideration of rate policies. For example, he said it is quite possible that the rate structure could be greatly simplified and the number of classifications of freight reduced and placed on a basis better adapted to meet motor competition. When Senator Long remarked that the co-ordinator would have more power than the commission Mr. Eastman replied that he would be subject to the commission in every respect.

Mr. Eastman also said that the right to route freight is given by law to the shippers and he did not see how any agreement of the carriers could settle that. Later he pointed out that usually there are many economical routes between important points and that the shortest route is not always the most economical. He would not expect the co-ordinator to close routes within reasonable limits or that the commission would let him if he did and he thought there would still be a sufficiency of routes to carry the traffic and provide competition.

Several Senators were inclined to object because the bill would have the effect of reducing employment and asked if a six-hour day should not be established. Mr. Eastman said the railroads could hardly afford to increase wages and that he did not think the employees would be satisfied with six-hour pay.

After saying that he believed the railroads would co-operate, perhaps not 100 per cent but in large measure, Commissioner Eastman said he would not expect the commission to go along with the co-ordinator 100 per cent. Mr. Eastman also testified at length before the House committee on Wednesday.

Labor Would Rewrite Bill

Donald R. Richberg, general counsel of the Railway Labor Executives' Association, told the Senate committee on May 10 that the organized railway employees oppose the program embodied in S. 1580 and H.R. 5500, because "it provides a mechanism of false economy which will seriously reduce transportation service for the public, will deprive from 50,000 to 300,000 employees of work, will not permanently improve railroad operations or railroad credit, will retard economic recovery and will promote policies that will work infinite harm to the public interest." He discussed the bill as if it proposed a wholesale consolidation plan. "The fact is now made plain in the testimony of the sponsors of the bill," he said, "that substantially all of the powers that can be practically exercised are to be exercised either directly by or under the control of the co-ordinating committees selected by railroad management. The bill, therefore, enthrones only an infant Czar under the regency of railroad managers."

"The railway labor organizations during the period of the development of this legislation protested in vain against the theories which seem to underlie it. They

pointed out that a choice must be made at the outset between preserving a generally competitive system or establishing a monopoly system. They insisted and now insist that if we can no longer pay the price of competitive waste in order to obtain the benefits of competitive initiative and efficiency, then we should face the fact that we cannot compromise with partial competition and partial monopoly; that a private monopoly of a public service is intolerable; and that when we accept the necessity of monopolizing transportation we are accepting the ultimate necessity of an ultimate governmental transportation service.

"In the proposed bill the Congress is considering an effort to accomplish the impossible; to bring about a consolidation of railroad operations whereby less transportation service will be furnished but more money will be made; to bring about greater concentration of private control, fostering monopoly, while at the same time attempting to increase public control; to deflate capital and labor drastically in a great essential industry, while at the same time promoting a program of inflation and economic recovery. We do not believe that such an effort can succeed. We believe that such a legislative measure is fundamentally unsound, but we will not content ourselves with a general opposition to this proposal, recognizing that it has behind it the encouragement of the administration and believing that its political sponsorship is well-intentioned but ill-advised; that it is actuated by high purposes which however cannot be realized through this legislation.

"We will present our comments in the form of proposed amendments, and, in explaining the need for such amendments, it may be possible not only to demonstrate the weaknesses in the bill as drafted, but perhaps we may also be able to demonstrate the fundamental unsoundness of this method of attacking the problem."

The amendments were summarized as follows:

1. The powers of the co-ordinator should be extended over motor, water, air and other transportation services, which ought to be co-ordinated with railroad operations in any effort to improve conditions in the transportation industry.

2. The purposes of the act should comprehend measures to improve labor relations and to stabilize employment so that railroads and other transportation services may be operated, not merely to produce returns to investors and service to the public, but also to provide a secure livelihood for a substantial part of the working population.

3. In order to carry out this principle of economic stability, it is necessary to provide for the participation of representatives of labor in planning and carrying out industrial operations. The government should insist, at least when its aid and co-operation are necessary to improve industrial operations, that representatives of the workers should participate constructively in economic planning and should not be relegated merely to the role of critics and obstructionists.

4. It is the established policy of the federal government, as stated in the Railway Labor Act, to obligate all carriers and employees "to exert every reasonable effort to make and to maintain agreements concerning rates of pay, rules, and working conditions, and to settle all disputes, whether arising out of the application of agreements or otherwise, in order to avoid any interruption to commerce or to the operation of any carrier growing out of any dispute between the carrier and the employees thereof." This policy is affirmed in the draft of the proposed legislation, but the legislation is wholly lacking in provisions conferring upon the co-ordinator adequate authority to insure compliance with the federal law. We submit that it is intolerable for the carriers to come to Congress, seeking the aid of the government of the United States, while persisting in a policy of general evasion and frequently down-right violation of the requirements of the federal law.

5. The government cannot at the present time assume the responsibility for depriving workers of employment without assuming at the same time the responsibility for their future support. It would be far better for the government to subsidize their continued employment, thereby gaining in exchange for it some public service, than to deprive them of employment and then to assume the burden of their support in idleness. We, therefore, propose that provision must be made for substitute

employment or other means of self-support, or a pension or dismissal wage to take care of those displaced from service under the requirements of this bill.

6. In order to increase the total volume of employment and not to decrease it under the operation of this bill we also propose that the co-ordinator shall have authority to direct rehabilitations, improvements and extensions of transportation facilities, wherever funds are available to the carriers or can be obtained through loans, or where public funds are made available for such purposes. If such a program of rehabilitation were undertaken in connection with a program to eliminate wasteful operations and duplications of service, the net result might well be an increase instead of a decrease of employment.

7. It should be made the duty of the federal co-ordinator to provide for the retirement of property no longer used or useful, in such a manner that the carriers may not set up in their investment accounts claims for a return upon property no longer used or useful in the public service. The carriers assume no obligation to pay employees any return on their life investments when they are retired from service. The public should not be required to pay to the carriers in transportation rates a return upon investments in property permanently or temporarily retired from public service.

8. The financial reorganization of many carriers is urgently required in the public interest. We see no reason why the benefits of the proposed act should be conferred upon any carrier which declines to undertake such action as the federal co-ordinator deems necessary for a financial reorganization or reduction of fixed charges. Therefore, we believe that specific power should be given not only to promote but to bring about financial reorganizations and reductions of fixed charges, through declining to extend the benefits of the act to recalcitrant carriers, and through declining to relieve such carriers of their present existing liability under the recapture provision of the Interstate Commerce Act. In this way at least \$100,000,000 could be saved annually without increasing unemployment.

No Final Choice: Competition or Government Operation

It is our final conclusion that a choice should be made between continuing the operation of the railroads as privately owned competitive systems and accepting the necessity for complete direct public control. If, even as an emergency measure, it is necessary for the federal government to assume any such authority and responsibility as is proposed in the present act we submit that the federal government can only effectively exercise such control and meet its responsibility by assuming complete emergency federal control.

We would be assured that the investments of savings banks, insurance companies and educational institutions in railroad securities would be protected; that railroad credit would be maintained and not destroyed in the speculative adventures of would-be "Napoleons of transportation". We would be assured that the railroads would be maintained in safe operating condition and that transportation service would not be denied to communities dependent upon it.

According to the dismal pictures of conditions on the railroads which are painted by the spokesmen of the railroads and the spokesmen of the government, we are again facing as in 1917 a breakdown of transportation service and an inability of the railroads to function effectively in a national crisis, and we are told again that the only agency capable of bringing order out of chaos, of co-ordinating operations and improving railroad credit, and insuring safe, adequate and continuous transportation service, is the federal government. But if the government must be made responsible for the maintenance of an adequate transportation service, it should take and exercise the full power to fulfill that responsibility.

Mr. Richberg also submitted and discussed in reply to questions the detailed amendments which he proposed, which would amount to almost a rewriting of the bill. He told the committee that the provisions of the bill would remove the benefits of railroad service from many small communities and said it represented "the policy of defeatism which is prevailing very largely among railroad managers." He also submitted a tabulation showing a total of 1,489 state laws affecting railroads, of which 264 affect railroad labor, saying that the bill proposes that they may be set aside by railroad management practically at the will of one official, but he did not show how any order of the co-ordinator could possibly involve many of them. He said he did not think the amendments proposed were entirely out of line with the policy of the government because he had gained the

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Signal Section Meets in New York

Economics of signaling projects and new developments
in highway crossing protection among
important subjects discussed

THE consolidation of interlockings, the reverting to single-track operation with centralized traffic control and similar projects effecting decided economies were discussed at the annual convention of the Signal Section, A. R. A., in New York on May 9 and 10. H. H. Orr, superintendent of telegraph and signals of the Chicago & Eastern Illinois, presided as chairman, the convention being attended by 255 members.

Reports of the committees on Economics of Railway Signaling, on Design and on Highway Crossing Protection are abstracted here, while the remaining reports, which were of a more technical nature, are mentioned only briefly. At the close of the session on Wednesday, the secretary announced the election of officers for the coming year as follows: Chairman, J. E. Saunders, signal engineer, Delaware, Lackawanna & Western; first vice-chairman, H. G. Morgan, signal engineer, Illinois Central; and second vice-chairman G. H. Dryden, signal engineer, Baltimore & Ohio. The newly elected members of the committee of direction include Mr. Dryden, F. W. Bender, signal engineer, Central Railroad of New Jersey, W. F. Lane, signal engineer, Chicago, Burlington & Quincy, and R. A. Sheets, signal engineer, Chicago & North Western.

Report on Highway Crossing Signals

A. H. Rudd, chief signal engineer of the Pennsylvania and committee chairman, presented the report of the Committee on Highway Crossing Protection. A revision of the Manual with reference to flashing light and wig-wag signals was approved. Mr. Rudd then presented a verbal report with reference to federal and state activities, an abstract of which follows:

The railroad commission of Iowa has recommended to the railroads that the standards and practices as shown in Bulletin No. 1 of the A. R. A. Joint Committee on Grade Crossing Protection be followed on all new and revised installations in that state.

The Public Utilities Commission of Rhode Island has issued an order approving the use of flashing-light signals conforming to the standards shown in Bulletin No. 1, mentioned above.

The Public Utilities Commission of Colorado has issued an order adopting the standard signs and signals shown in Bulletin No. 1.

The secretary of the Board of Public Utilities Commissioners of New Jersey has issued a statement to the effect that the signals and practices recommended in Bulletin No. 1 are approved for use in that state.

The Department of Public Utilities of Massachusetts issued an order approving the installation on the New Haven of a flashing light signal which conforms to standards shown in Bulletin No. 1, and it is to be assumed that this action comprises an approval of this standard in this state.

The Public Utilities Commission of Utah has issued an order promulgating standard rules and regulations for the construction of grade crossing signals and signs which, in effect, conform to the requirements of Bulletin No. 1.

The Railroad Commission of California approved an order effective January 1, 1933, permitting the use of only two types of signals, the wig-wag and the flashing-light signal with the rotating disc stop sign.

The Public Utilities Commission of Connecticut has approved the flashing light signal with the "Stop on Red Signal" signs recommended in Bulletin No. 1.

At a meeting of the Joint Committee on Grade Cross-

ing Protection on February 7, it was recommended that the Signal Section Committee on Highway Crossing Protection be requested to consider the use of "Stop and Go" type of signal (green for go and red for stop) and to investigate and report on its merits and economy for use under general conditions and under special conditions as may be desirable for protection of a rail-highway grade crossing.

Mr. Rudd explained that his committee had studied this matter and was practically unanimous in the conclusion that there was no reason to change the present specifications, and that the "Stop and Go" signal should be used only in cities and where attended and controlled by a watchman, and furthermore, that this type of signal should not be used where controlled automatically by train movements.

Economic Benefits of Signaling

The report of the committee on Economics of Railway Signaling, of which B. J. Schwendt (N. Y. C.), was chairman, included statements of savings effected on five different consolidated interlockings, one combined interlocking and highway crossing signal installation, and one centralized traffic control project, as well as a history of the economics of railway signaling.

At Guthrie, Ohio, on the Pennsylvania, a mechanical interlocking was burned and instead of rebuilding in kind it was decided to install power switches and signals controlled from a C.T.C. type machine located in an existing tower at Mohican, 5.8 miles away. An average of 30 passenger and 25 freight trains, and 11 light engines move through this territory daily. It is estimated that to have rebuilt the Guthrie interlocking would have cost \$15,560, with no saving in operation. The difference between this amount and the total cost of \$23,099, or \$7,539, represents the additional outlay upon which the saving of \$5,203 was made. On this basis the percentage of return over and above 6 per cent interest is 69 per cent.

At Askum, Ill., the Illinois Central installed a C.T.C. installation to control switches and signals formerly requiring three separate interlockings from 3.7 to 4.9 miles apart. The total cost of the C.T.C. installation was \$21,561, while the savings in wages of operators was \$11,388 annually.

At Boone, Iowa, the Chicago & North Western had a mechanical interlocking at the west entrance to a yard. As a means of reducing expenses, this interlocking was removed, and the switches and signal formerly controlled from it were remotely controlled from a plant at 8th Street, Boone. The crossover was eliminated and the switch in the eastward main track was equipped with a spring buffer mechanism. A yard indicator, remotely controlled from the interlocking station at 8th street, was installed for conveying information to trainmen of westward trains entering the yard. The number of through mainline trains averages 22, and the average number of movements to and from the yard is 14 daily. The changeover cost \$9,205 chargeable to capital investment, and \$5,510 to operating expenses. The annual savings effected included \$5,475 for operators' wages and \$125 for interlocking station expense, totaling \$5,600.

At Waterloo, Iowa, the Chicago Great Western installed two interlockings and a series of highway crossing signals that cost \$21,774 and save \$26,648 annually. The grade crossings with the Chicago, Rock Island & Pacific in West Waterloo and with the Illinois Central in East Waterloo were protected by mechanical

gates, and all trains were required to stop and clear the gates before proceeding over the crossing. Fourteen highway crossings were also involved. 7 having part-time flag protection; 3 having flagmen protecting full time; 2 with crossing gate protection part time; and 2 with no special protection.

Obviously, one consequence of the former method of operation was serious interference with vehicular traffic, because 20 to 30 trains on the three railroads stopping for these two grade crossings daily, had the effect literally of cutting the town into separate parts and indirectly hampering business. Public opinion finally took the form of agitation for grade separation which at best would have been a costly solution of this problem. After several conferences between railroad and municipal officers, a plan was agreed upon whereby interlockings would be installed

Economic Statement of Installation at Waterloo, Iowa

1. Cost of installation:	
(a) Railroad crossing protection.....	\$ 7,115
(b) Highway crossing protection.....	14,659
(c) Total	\$21,774
2. Gross saving per annum:	
(a) Elimination of train stops on C. G. W.....	\$ 8,056
(b) Elimination of train stops on C. R. I. & P.....	2,555
(c) Elimination of train stops on I. C.....	1,840
(d) Watchmen wages	14,197
(e) Total	\$26,648
3. Deductions from gross saving:	
(a) Annual expenses and charges:	
1. Additional maintenance and operating expense	\$12,558
2. Interest charges at 6% on total cost.....	1,306
3. Total	\$13,864
4. Net saving per annum.....	\$12,784
5. Annual return over and above 6% interest Charges on total cost.....	58.7%

at each of the two railway grade crossings to eliminate the unnecessary train stops, and flashing-light highway crossing signals would be installed at all the principal streets to afford continuous day and night protection.

In accordance with this plan, flasher-light signals were installed at all but one of these crossings and at this one street, flagmen on three tracks were retained for the purpose of operating the signals at two streets, in addition to flagging at the one. Also, interlockings without mechanical locking were installed at the Great Western-Rock Island and the Great Western-Illinois Central crossings, using dwarf signals throughout, the operators at the latter interlocking also controlling the highway crossing signals at six streets. With the highway crossing signals divided in this way, 6 interlocking operators and 3 flagmen now handle all the work that formerly required the services of 13 flagmen and 1 gateman. Not only is a saving in wages being made, but train operation through this territory has been greatly improved and expedited, and more reliable and efficient street crossing protection has been afforded.

In the report on the economy of reverting to single track operation the most interesting item had reference to the changeover in 200 miles of line on the Milwaukee, where an estimated saving of \$1,000 per mile annually was thus effected, as explained in detail in an article on page 263 of the *Railway Age* for August 20, 1932.

A report on economical train performance on single track explained in detail the theoretical and practical capacities of single track lines and cited instances where as many as 70 trains have been operated over certain lines in 24 hours. In one actual field study on a 20-mile section of single track, with 3 sidings, the freight train time under manual block operation was 1.46 hours, giving a theoretical capacity of about 65 trains per day. Due to the trains being fleeted during a few hours of the night and to the sidings not being located equal time distances apart, the railroad experienced considerable delays in operating 40 trains per day, and studies were made to determine how to relieve traffic congestion. It was finally decided to eliminate delays at meeting points and speed up operation by installing longer sidings, power operation of the eight siding and end of double-track switches, and directing train movements by signal indica-

tion with a C.T.C. system, at about one-fifth the cost of a second track.

After the C.T.C. system had been installed it was found that the average freight train time over the 20 miles had been reduced from 1.46 to 1.17 hours, giving a theoretical capacity of about 82 trains per day. On account of the train delays eliminated at the meeting points by the use of power-operated switches and the many non-stop meets (sidings were about 1½ times the train length), it was possible to increase the train load and reduce the number of trains. The actual operating capacity of 40 trains per day on this 20-mile single track section, compared to the theoretical capacity of 65 trains per day, represents what may be called a "load factor" of 61 per cent. Studies on another railroad have shown that this load factor varies from 62 to 73 per cent.

An extended report was given on the history of economics of railway signaling, including data on the cost of stopping trains, interlocking economy and savings effected by various installations, this report being too extensive to be given here.

Other Reports

The Committee on Interlocking presented a set of requisites for mechanically interlocking the levers of interlocking machines, specifications for electro-mechanical interlocking machines, and for electro-pneumatic interlocking.

The Committee on D-c. Signaling presented a specification for plug-type rail bonds, a specification for operating mechanism for search-light type- color-light signals, and progress reports on the shunting of a-c. track circuits by rubber tired rail passenger cars and a-c.-d-c. rectified track circuits. The Committee on Instructions presented a specification for portable d-c. volt-ammeters, and instructions as to methods of measuring ground resistance and as to the maintenance of d-c. track circuits. As a part of the year's work, the committee presented Chap. III—Economic Phases of Signaling, which is to be included in the Principles and Practices of American Signaling, of which 16 other chapters, each bound separately, are now ready for distribution. This chapter on economics explains in detail the savings being effected by the application of modern signaling facilities, and can be used to advantage by operating as well as signal engineers. The Committee on Design presented 2 revised drawings, 15 obsolete drawings to be removed from the Manual and 11 new drawings, as well as specifications and drawings for reflector units and reflector type signs for highway crossings and highway crossing signals, these specifications conforming to the recommendation of the A. R. A. Joint Committee on Highway Crossing Protection.

The Committee on Contacts and Performance Records presented an explanation of the unit basis of determining the division of ownership and maintenance expenses for such joint facilities as interlockings. The Committee on A-C. Signaling presented revised specifications for a low-voltage lightning arrester, switchboards, and electric motor semaphore signals, and also an extended progress report on protection against lightning and the use of spark gap protectors on electrified roads.

The Committee on Overhead and Underground Lines submitted a form for wire inspection reports, specifications for weather proof 30 per cent conductivity copper-covered steel line wire, mineral rubber compound insulated signal wire, and a progress report on steel and zinc-covered taped cables.

The Committee on Signaling Practice presented a report on the present status of automatic train control, a set of requisites for signal protection at spring switches, a report on the use of reflecting devices as a substitute

for oil or electric lamps, and a report on spring switch markers and grade or tonnage signal markers, a sign displaying the letter G mounted below and to the right of the operating signal unit being recommended as a marker to permit heavy trains to pass an automatic signal displaying danger, without stopping.

As a part of the report of the Committee on Signaling Practice, S. N. Mills, assistant director of the Bureau of Safety, was called up to discuss the train control and cab signal situation. Mr. Mills explained that the Interstate Commerce Commission has recognized the conditions on the railroads, brought about by reduced traffic, which have reduced the necessity for automatic train control and has, therefore, granted requests from certain roads to discontinue the operation of such protection. He explained that the Commission has a specification for cab signals which is being adjusted to meet the requirements of the individual roads. One fundamental feature is that the cab signal should, so far as possible, afford indications consistent with the indications of the wayside signals except when a wayside signal displays a less restrictive indication than is required or warranted

by existing conditions. Nine different arrangements of cab signal indications are being used and some progress toward standardization is desirable.

Mr. Mills explained that cab signaling was not included as a part of the original orders of the Commission but was added by the roads as an adjunct. Now, however, when the roads desire to use cab signals only, in lieu of train control, the new specifications as to cab signaling must be adhered to. One point is that the cab signals must be arranged as running signals, and not as speed indicating devices. Furthermore, the acknowledging arrangement must be such that the audible signal will not be silenced.

P. M. Gault (M. P.) chairman, explained that up to date the following roads have been granted permission to cease operation of train control: G. N., N. P., C. B. & Q., T. & N. O., M. P., C. R. I. & P., D. & H., C. I. & L., St. L.-S. F., and C. M. St. P. & P. The roads which have discontinued the automatic brake setting devices but do use cab signals are as follows: U. P., Penna., N. & W., D. L. & W., Reading and C. R. R. of N. J.

Locomotive Streamlining Developed by Wind Tunnel Test*

Work done in National Research Laboratories, Ottawa, Canada, shows how vision may be improved and air resistance reduced

It is an unfortunate feature of the steam locomotive that the exhaust must be so located as seriously to impair the engineman's vision when drifting. Many schemes for curing this trouble by attaching odd shaped devices to the boiler front and stack have been tried. Their lack of success is due to the fact that the aerodynamics of the entire locomotive are involved, particularly the front and upper surfaces of the boiler. The Canadian National Railways and a number of other roads have experimented with deflectors at the stack, but they have not given satisfaction.

In 1931 the Canadian National requested the National Research Council to undertake an investigation with a view to improving high-speed locomotive design. In this investigation it was hoped that radical changes in the entire locomotive shape would yield considerable improvement in smoke flow and resistance. It was felt that the use of side guards was an attempt to improve slightly what is also a very poor aerodynamic shape. Wind tunnel tests substantiated the statement that the entire upper surface of a modern locomotive is shrouded in eddies due to poor aerodynamic design. These eddies behind the stack, dome and valves drop the smoke which is then slowly dissipated since the eddies reduce considerably the average air velocity over the boiler. This retarding of the flow adjacent to the boiler is further enhanced by the crude shape of the boiler front. Removal of the smoke nuisance by changes in design which will give smooth high-speed air flow over the boiler top

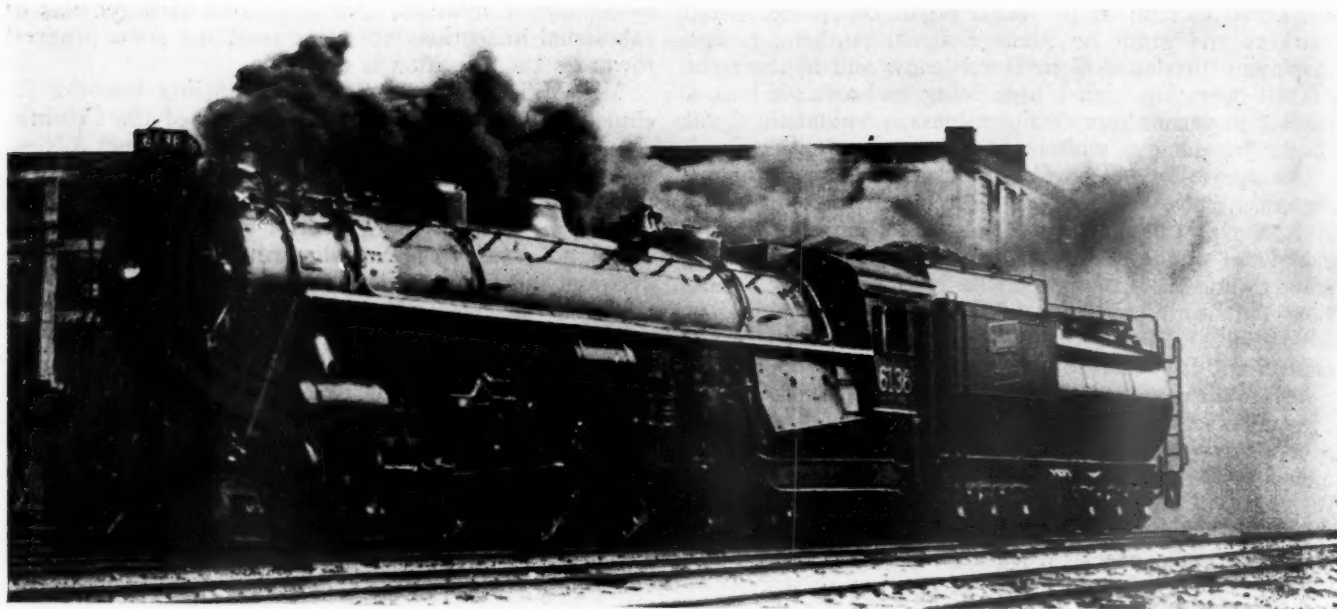
and sides will obviously produce at the same time a reduction of the air resistance of the locomotive and, in recent times, the reduction of running costs by minimizing air resistance has been slowly coming to the forefront.

Air resistance at low or medium speeds is small in comparison with other sources of resistance, and the locomotive itself is only about 30 per cent of the total air resistance of the train. Since, however, air resistance



C. N. R. 6100 Class Locomotive Drifting, Showing Cab Window Obscured By Smoke

* An abstract of a paper by J. J. Green, junior research physicist, National Research Laboratories, Ottawa, Canada, printed in the January, 1933, issue of the Canadian Journal of Research.



C. N. R. 6100 Class Locomotive Drifting, Showing Poor Flow of Smoke

increases as the square of the speed, whereas other resistances rise only as some power of the speed less than unity, it is evident that for high-speed passenger service nowadays common to railroad practice, air resistance reduction merits attention in the quest for economy.

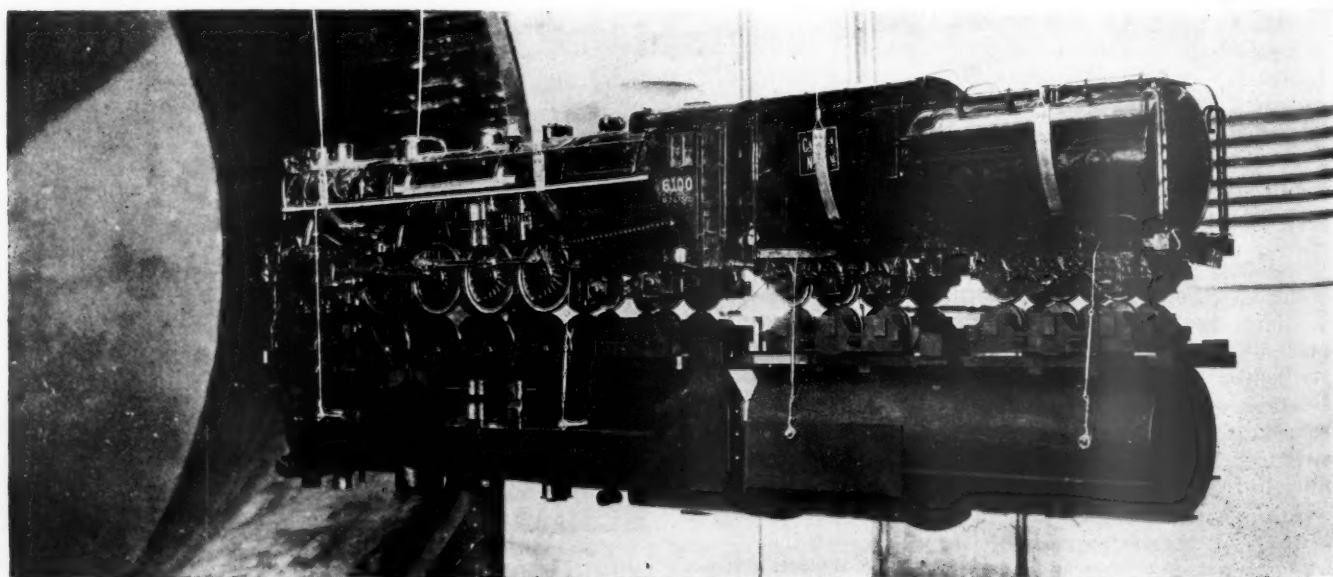
Scope of the Tests

In the investigations made of a Canadian National 6100 class locomotive and tender in the wind tunnel laboratories of the National Research Laboratories, a $\frac{1}{12}$ -scale model, complete in every detail and constructed mainly of steel, was used. The open tunnel with a jet 9 ft. in diameter, 13 ft. long and a maximum speed of 160, m.p.h., was used. A number of restrictions were imposed on the work at the outset. For example, owing to legal restrictions, certain features, such as a bell, whistle, steps at the front and running boards at the side, cannot be eliminated, although their disposition might be changed. Further restrictions arose from the fact that the general shape, size and clearances and operating arrangements must of necessity be retained and

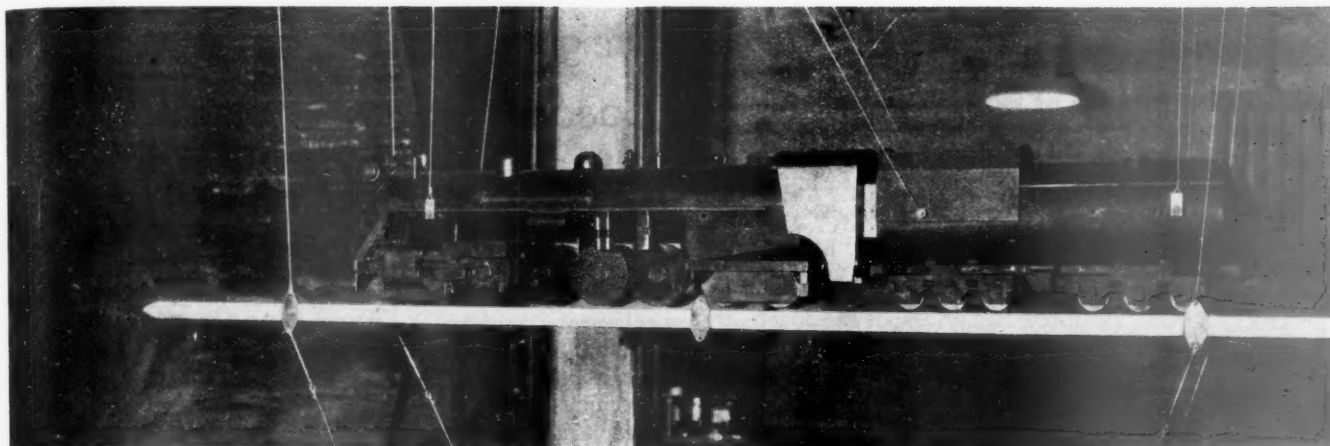
that definite accessibility for moving parts of the locomotive was required.

In spite of the fact that a great saving could be made in air resistance, it was obvious that no cowling could be tolerated over the running gear of the locomotive, and the firebox had to be left free to prevent blocking the air openings into the ash pan. Other structural limitations were imposed by the height above the water level in the boiler and the restricted position of the feedwater heater. Clearances for water-supply pipes also limited the level of the top of the water tank. In view of the difficulty of extensive alteration to the scale model which was supplied, without damaging it, a wooden model was made to the same dimensions reproducing all the main essentials without the minor details. Both models were tested for resistance and the ground effect of the steel model was measured with a dummy ground, utilizing the wooden model as a mirror image.

The wind speeds employed in the tests ranged up to 170 ft. per sec., and above speeds of 30 or 40 ft. per sec. no scale effect existed; that is, the resistance co-



Model of C. N. R. 6100 Class Locomotive and Tender ($\frac{1}{12}$ Scale) Suspended in Wind Tunnel Jet with Wooden Dummy to Give Ground Effect

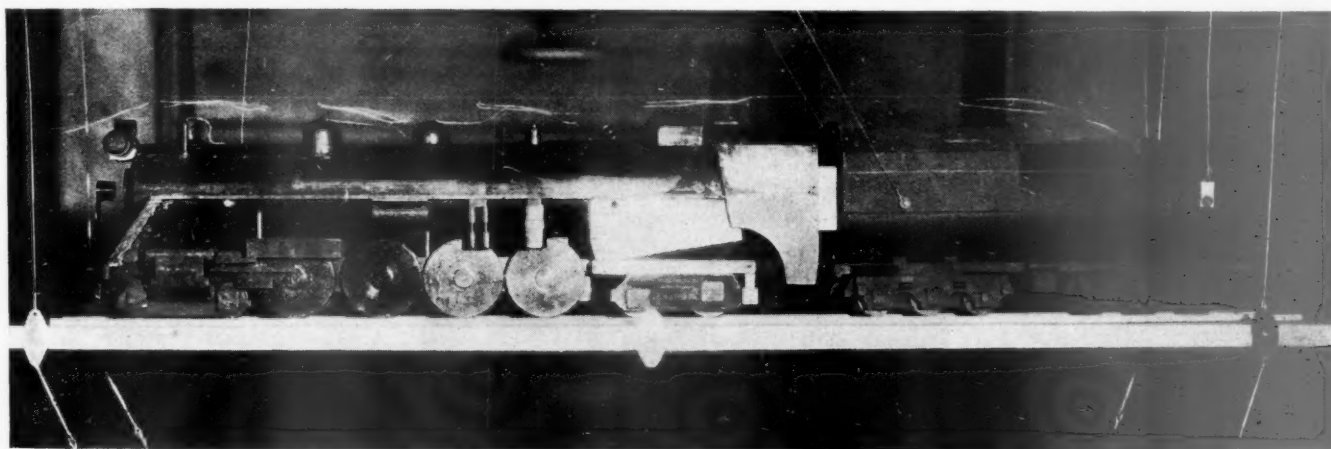


Wooden Model with Dummy Ground Suspended in Wind Tunnel

efficient obtained by dividing the resistance by the square of the wind speed is a constant within limits of practical measurement. This linear variation of resistance with the square of the speed allows production of the full-scale resistance with greater assurance of accuracy.

The method initially employed for measuring resistance was to suspend the model by wires and observe

tions to the general exterior shape of the wooden model of the locomotive were made, and wind tunnel tests made after each progressive modification was completed. The air currents around the model with its various modifications were studied by means of silk streamers attached to a grid of very fine wire suspended just above the locomotive and another just in front of the model. Addi-



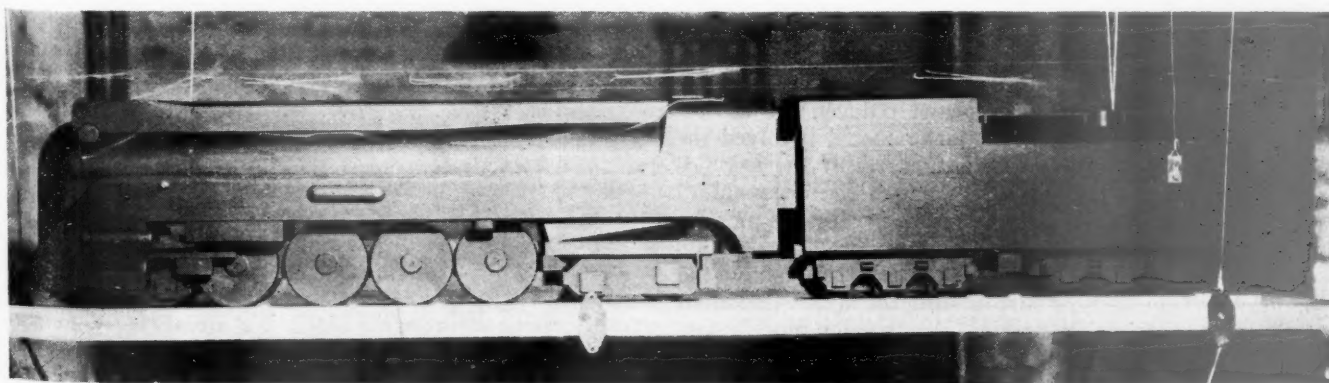
Air Flow Over Unmodified Model as Indicated by Silk Threads—Wind Speed, 45 m. p. h.

its "swayback" in the wind, computing the resistance from the observations. This method, however, had certain objections, in view of which a subframe drag balance was built above the jet. The force on the model was transmitted by suspension and bracing wires to the subframe and thence to the scale pan of an accurate balance.

As the investigations progressed, a series of modifica-

tional threads were attached along the sides of the boiler and in front of the cab window. These threads proved very sensitive to changes in the shape of the locomotive and indicated satisfactorily the beneficial effect, or otherwise, of any specific modification. In addition, they were easily photographed for purposes of recording the air currents existing around the body of the model.

By progressive steps there has been developed for the

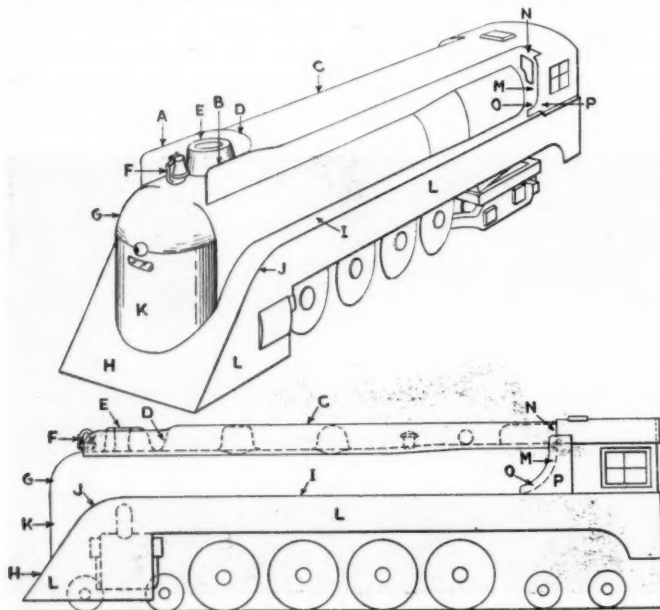


Air Flow at 45 m. p. h. Over Modified Model as Indicated by Silk Threads

locomotive an improved shape which operates primarily by inducing a layer of pure air to enter under the smoke layer, such that a space enveloping the boiler and extending well above the top of the boiler is fed continuously with air uncontaminated by smoke. The construction of the model is such that this smoke-free layer is obtained beneath the smoke with a minimum of intermingling of the two. Smooth entry for this clean air is effected by a new design for the locomotive front end. At the position of the cab further quantities of smoke-free air are induced upward in front of the cab windows to augment the layer of pure air immediately above the locomotive. Here originally existed a downward current of smoke which necessitated the provision of a grating on the running board in front of the cab window to allow for the disposal of cinders that collected there.

27 Modifications Made to Wooden Models

During the course of the investigations a progressive series of some 27 modifications were made to the wooden model and investigations carried out with a view to



Drawings of Completely Modified Model

A and B, side plates on each side of stack; C, cowling over the dome, turrets, etc. A and B are continuations of the sides of C. D, smooth curved surface from boiler top to top of cowling C. E, streamlined smoke stack. F, bell edgewise to the wind in front of the stack. G, approximately quarter spherical nose on boiler. H, inclined plane replacing pilot on existing types (coupler not shown in drawing). I, running boards. J, rounded front of running boards. K, smooth cylindrical front between G and H. L, side curtains over cylinder, valve motion, etc. M, new front to cab—sloping backwards from the running boards. N, smooth rounded corner between cab roof and new cab front M. O, smooth generous curve between running board I and cab front M. P, side plates fitted to cab sides and protruding somewhat forward of the cab front M.

determining the effect of such modifications. As finally modified in practical form, the changes necessary to effect the flow of smoke as desired resulted in a reduction of approximately 35 per cent of the air resistance of the locomotive. The best model tested reduced the air resistance by 43 per cent. This latter model involved the use of a cowling over the working parts of the locomotive, which, of course, interfered with the accessibility required for these parts and, therefore, could not be considered as a practical application.

The illustrations accompanying this article show the conditions of smoke flow surrounding the actual Canadian National locomotive, the original and wooden models suspended in the wind tunnel, and the models as finally modified as a result of the investigations. Application has been made for patents on the new design.

Freight Car Loading Increased

WASHINGTON, D. C.

REVENUE freight car loading in the week ended April 29 took a sudden jump to 535,676 cars, an increase of 42,706 cars as compared with the previous week and a decrease of only 18,521 cars as compared with the corresponding week of last year. Miscellaneous loading, 206,290 cars, showed an increase of 21,052 cars as compared with the week before and of 6,573 cars as compared with last year. Grain and grain products also showed an increase of 6,781 cars above the figures for the previous week and of 8,749 cars above those for last year and all other commodity classifications showed a heavier loading than in the week before, while ore and coke made favorable comparisons with last year. The summary, as compiled by the Car Service Division of the American Railway Association, follows:

Revenue Freight Car Loading
Week Ended Saturday, April 29, 1933

Districts	1933	1932	1931
Eastern	120,353	134,119	184,137
Allegheny	98,038	113,322	160,070
Pocahontas	34,371	34,304	42,557
Southern	85,555	83,407	118,327
Northwestern	67,379	63,181	93,425
Central Western	80,097	81,508	110,039
Southwestern	49,883	44,356	66,187
Total Western Districts	197,359	189,045	269,651
Total All Roads	535,676	554,197	774,742
Commodities			
Grain and Grain Products	41,514	32,765	36,925
Live Stock	20,377	19,641	23,800
Coal	77,295	91,054	122,172
Coke	3,610	3,018	7,510
Forest Products	18,749	19,936	33,807
Ore	5,722	2,996	10,977
Mdse. L. C. L.	162,119	185,070	227,132
Miscellaneous	206,290	199,717	312,419
April 29	535,676	554,197	774,742
April 22	492,970	562,527	758,503
April 15	494,215	566,826	759,494
April 8	487,296	545,623	737,272
April 1	494,588	544,961	727,852
Cumulative total, 17 weeks	8,214,424	9,564,963	12,402,121

The freight car surplus on April 14 was 650,966 cars, a decrease of 30,237 cars as compared with the number on March 31. The total included 336,573 box cars, 242,595 coal cars, 31,327 stock cars, and 13,653 refrigerator cars.

Car Loading in Canada

Car loadings in Canada for the week ended April 29 increased to 36,049 cars from 34,156 cars for the previous week and the index number rose from 59.44 to 62.59. This is the best showing for several weeks.

	Total Cars Loaded	Total Cars Rec'd from Connections
Total for Canada:		
April 29, 1933	36,049	18,192
April 22, 1933	34,156	17,086
April 15, 1933	30,136	17,382
April 30, 1932	41,750	21,026
Cumulative Totals for Canada:		
April 29, 1933	563,510	292,798
April 30, 1932	701,713	367,908
April 25, 1931	802,205	478,722

WHEN A TRAIN WAS CALLED A "LINE"—[From The New York Evening Post, April, 1833]—We are requested to state that the Camden and Amboy Rail Road company will commence running on Thursday the 25th instant, three lines daily for Philadelphia, leaving each city at 6 and 10 a.m. and 3 p.m.

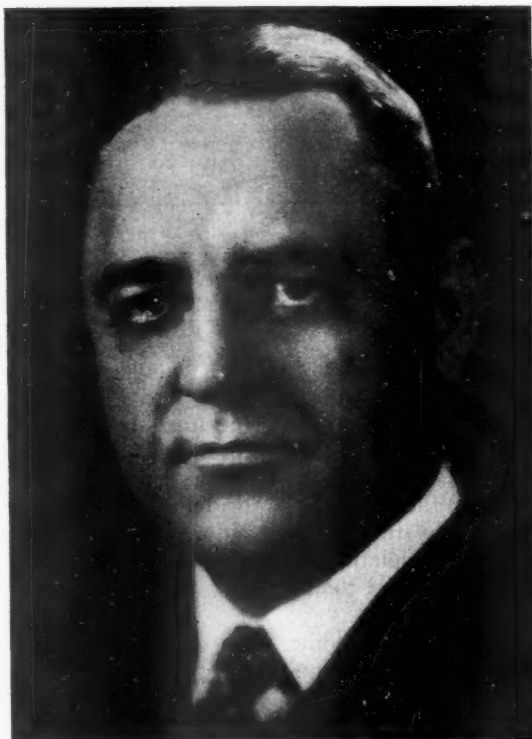
Western Union Telegraph Company Chooses White for President

Central of New Jersey executive is expected to resign present position at meeting of that road's board on May 25

ROY B. WHITE, president of the Central of New Jersey since October, 1926, will, on June 1, become president of the Western Union Telegraph Company, succeeding Newcomb Carlton who is to become chairman of the Western Union board of directors. Mr. White, who was elected at a meeting of the Western Union board on May 9, is expected to resign from the Central of New Jersey presidency at a meeting of that road's board of directors on May 25. His departure from the railway field comes after 33 years of service during which time he rose from telegraph operator to become, upon his election to the Central of New Jersey presidency in 1926, one of the youngest railroad presidents in the East. He was 43 years old at that time.

It was in the latter part of 1926 that Mr. White, after serving as senior vice-president of the C. N. J. from January of that year, succeeded to the presidency which William G. Besler, now chairman of the Central of New Jersey board of directors, had held since 1914. Thus the period of Mr. White's incumbency covers a time which saw railway revenues in turn at all-time peaks and unprecedented low levels. The task of adjusting expenses to such violent changes was a difficult one.

During 1927, the first full year that Mr. White was president, gross revenues of the Central of New Jersey totaled \$58,745,712 and by 1932 they had fallen to \$30,357,469, a decline of nearly 50 per cent. In fact at no time during the more than six years of his presidency was Mr. White aided in his executive task by rising gross revenues. During the first three years—1927, 1928, and 1929—gross revenues of the Central of New Jersey remained comparatively stable. From the 1926 peak of \$60,171,118, the gross fell in 1927 to \$58,745,712 and it dropped slightly further in 1928 to \$58,002,057; in 1929 it was \$58,136,940. Then, after a falling off of \$6,383,117 in 1930, came the bigger declines of 1931 and 1932. Such has been the skillful control of expenses however that these were at the same time reduced by virtually the same proportions or from a 1927 figure of \$43,344,247 to \$22,182,692 in 1932. Net railway operating income in 1932 was \$2,507,298 as compared with \$5,017,812 in 1927.



R. B. White

But while the operating expenses have thus been decreased in line with the decrease in revenues, Mr. White points out in his 1932 annual report that this "has not been done at the expense of safe and efficient operation." He lists in this connection 1932 track improvements which included the replacement of 109,696 cross ties and 12,135 cu. yd. of stone ballast, as well as installations of new rail on 11.72 miles of main track and second-hand rail on about 20 miles of main and side tracks. Also, the program for retirement of obsolete equipment was continued last year when there were retired 19 locomotives, 577 freight cars, 15 passenger cars and 143 units of work equipment.

The Jersey Central, under Mr. White, has also been alert to changed conditions brought about by the advent of motor transport services and quickly moved to meet this challenge with improved passenger train

services and co-ordinated highway freight and passenger operations which latter it conducts through its subsidiary, the Jersey Central Transportation Company, operating some routes in conjunction with the Reading Transportation Company, subsidiary of the Reading.

Roy Barton White was born at Metcalf, Ill., on August, 8, 1883, and was educated in the public schools. He entered railroad service April 17, 1900, as a telegraph operator on the Indiana, Decatur & Western (now Baltimore & Ohio) and in January, 1903, he became a train dispatcher on the Cincinnati, Hamilton & Dayton (now B. & O.) He continued with the C. H. & D. until 1915, serving meanwhile successively as chief train dispatcher, chief clerk to the general superintendent and superintendent. On June 1, 1913, Mr. White became associated with the Baltimore & Ohio as superintendent at Flora, Ill. During 1916 and 1917 he served in the same capacity at Seymour, Ind., and from 1917 to 1921 at Philadelphia, Pa., and Baltimore, Md. From 1921 to 1923 he was general superintendent of the B. & O., with headquarters at Baltimore, and from 1923 to 1926 he served as general manager with headquarters at New York. Mr. White left the Baltimore & Ohio on January 20, 1926, to become senior vice-president of the Central of New Jersey and on October 28, 1926, he was elected to the C. N. J. presidency.

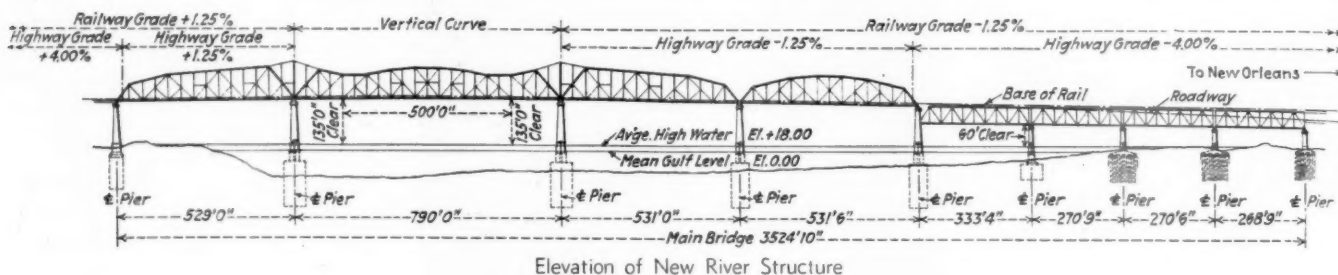
Mississippi River Bridge at New Orleans

AFTER years of discussion and repeated engineering studies of the possibility of bridging the Mississippi river at New Orleans, work is now in progress on the substructure of a crossing which will accommodate both railway and highway traffic, and thus eliminate the ferry service which has been maintained for many years. Work was started early this year and the construction schedule provides for the completion of the structure early in 1935.

The new bridge is being built under the direction of the Public Belt Railroad Commission. Its cost, esti-

1.25 per cent. On the through spans the two railway tracks will be located between the trusses at 13-ft. centers, while the two vehicle roadways, each 18 ft. wide, will be supported outside the trusses on cantilever extensions of the floor beams. However, beyond the ends of the through trusses, these roadways, which will descend on four per cent grades, will be supported on brackets cantilevered from the vertical members of the deck truss spans and the columns of the viaduct towers. These roadways will extend down to traffic circles at the ground level, which will permit the orderly approach and distribution of traffic.

The Seims-Helmers Company, St. Paul, Minn., has the contract for the substructure of the main bridge; the MacDonald Engineering Corporation, Chicago, the contract for the substructure of the approaches; the American Bridge Company, New York, the contract for



mated at approximately \$13,000,000, is being financed by the Reconstruction Finance Corporation under an arrangement whereby the corporation has agreed to take \$7,000,000 of bridge bonds issued by the State of Louisiana, and also enough bonds issued by the Public Belt Railroad Commission to cover the completion of the structure. The Southern Pacific has agreed to use the new bridge upon its completion.

The site of the new bridge is near Nine-mile point, just west of the city, and from nine to ten miles upstream from the present Canal street rail ferry crossings. The bridge will cross the river at approximately right angles, and, owing to the direction of the river at the point of crossing, it will extend in a more or less northwest-southeast direction.

Details of the Structure

The new bridge, which will be a double-track structure with a vehicle roadway on each side, will consist of a river crossing 3,525 ft. long, with viaduct approaches of 8,680 ft. and 10,791 ft. at the east and west ends, respectively. The chief feature of the river crossing will be a through truss cantilever structure, 1,850 ft. long, consisting of a main span of 790 ft. (embracing a suspended span of 500 ft.) and two anchor arms of approximately 530 ft. each. The remainder of the superstructure will consist of a through span 531 ft. 6 in. long, and four deck truss spans 333 ft. 4 in., 270 ft. 9 in., 270 ft. 6 in., and 268'9".

The substructure of the river bridge will consist of concrete piers which, with the exception of two at the east bank, will be put down by open dredging to a maximum depth of about 170 ft. below mean gulf level. The two east piers are being constructed on pile foundations. The approach viaducts will have tower spans of 45 ft. and intermediate spans of 69 ft. to 82 ft. and will be supported on concrete pedestals on pile foundations.

The through truss structure will be supported at an elevation affording a clearance of 135 ft. above mean high water, while the approach structures will be constructed with the railroad decks on descending grades of

the superstructure of the river spans, and the McClintic-Marshall Company, Pittsburgh, Pa., the contract for the superstructure of both approaches. The design of the bridge was prepared by Modjeski, Masters & Chase, New York, consulting engineers, who are responsible also for supervision of the construction.

Lightning As It Affects Transportation

LIGHTNING protection requirements for transmission and distribution circuits used on electrified sections of railroads were outlined in simplified form by D. R. MacLeod in a talk given to the Transportation Section of the American Institute of Electrical Engineers in New York on April 6, 1933.

Lightning protection has long been a subject for argument and only in recent years have adequate means been developed for protection of electrical circuits. Elaborate calculations backed up by observations of actual lightning discharges and the use of surge generators and oscillographs have provided the necessary data for lightning studies. Mr. MacLeod has reduced the studies and calculations to the point where he can show that in so far as the maximum damaging effect is concerned, traveling waves on power lines follow Ohm's Law, the simplest of all electrical formulae. He also proceeded to show how adequate protection could be provided at a reasonable cost by overhead ground wires, adequate grounds, lightning poles, graded insulation and lightning arresters.

Discussion

Following the presentation of Mr. MacLeod's paper, A. O. Austin, chief engineer, Ohio Brass Company, emphasized the need for reducing the cost of the overhead power distribution system. He divided the effects of lightning into three parts—those affecting respectively

the transmission line, the contact system and equipment. The capacitance of a ground in case of direct stroke, he said, may be of greater importance than low resistance because much current must flow in a short space of time. This circumstance, he said, makes the counterpoise mentioned by Mr. MacLeod particularly valuable. Mr. Austin also proposed the use of gaps in the overhead ground line to act as shock absorbers.

S. Withington, electrical engineer, New York, New Haven & Hartford, stated that the New Haven has used practically all forms of lightning arresters on its transmission and distribution circuits and that he is not certain that any type of lightning arrester is valuable. Much dependence is placed by the New Haven on overhead ground wires but the railroad is also handicapped by necessity of having to cross seven navigable streams between New York and New Haven. At these points the overhead wires cross the streams at an elevation of between 150 and 200 ft., which fact increases lightning hazards. One storm, Mr. Withington said, may open a dozen circuit breakers while it progresses from New York to New Haven.

Kent A. Hawley, chief engineer, Locke Insulator Company, indicated that he felt justified in living outside the world of mathematics in so far as lightning protection was concerned. He substantiated Mr. MacLeod's statement by saying it is only necessary for adequate lightning protection to see that the IR drop (current times resistance) in the line between the lightning influence and the ground was less than the flashover of the line insulators. Experience shows that transmission lines along railroads are less subject to lightning trouble than are the isolated transmission lines of power companies.

T. J. Wolfe, Westinghouse Electric & Mfg. Company, stated that theoretical calculations have been substantiated by surge testing with surge generators and oscillographs.

P. A. McGee, Reading Company, stated that on the Reading they had had no lightning trouble of consequence during 18 months of operation and had suffered only two direct hits, both of which occurred on lines over highways. The ground wire, Mr. McGee said, has uses other than lightning protection in the form of improved ground return and improved inductive coordination. Mr. McGee would like to see all towers grounded to the rail, even though it would require single-rail signal circuits.

W. S. H. Hamilton, assistant electrical engineer, New York Central, said that experience with direct current equipment shows that electrolytic arresters, often referred to as "pickle jars," effectively protect apparatus on locomotives and cars. He also stated that these arresters required considerable maintenance.

R. M. Allen, assistant engineer, D. L. & W., stated that highly effective protection of circuits is provided by high-speed circuit breakers. The cost of maintaining electrolytic arresters on equipment amounts to about \$12.00 per year for each installation and he further stated that there is no good substitute for these arresters. He also said that the lightning protection employing two ground wires on bridge type overhead is satisfactory while the single ground wire on the bracket type overhead supports was not equally effective.

C. J. McCarthy, assistant engineer, New York Central, showed applications of short pole spacings with overhead ground wire and good grounds as recommended by Mr. MacLeod's methods of calculation. On two sections of line so provided there has been no major equipment failures in about 25 years.

Co-ordinator Not To Be Czar

(Continued from page 692)

impression from conferences at the White House that the President did not believe that large numbers of men should be thrown out of work and that he felt that some protection for labor should be afforded. Senator Long said he agreed with Mr. Richberg that the bill is wholly unsound and that "it perpetuates the stringency of railroad regulation which has strangled and crippled the railroads."

Representatives of the railroads, including R. V. Fletcher and Carl R. Gray were expected to testify before the Senate committee on Thursday.

Position of the N. I. T. L. Committee

The National Industrial Traffic League has issued a statement of the action of its executive committee as to various sections of the bill. It favors a federal co-ordinator of transportation as an emergency measure. If a member of the Interstate Commerce Commission is appointed federal co-ordinator, he should be relieved entirely from the performance of any and all duties as a commissioner during the period he serves as co-ordinator. No more than one member of any Regional Co-ordinating Committee should be selected from any one railroad system and at least one member of each such committee should be well versed and experienced in traffic matters. It approved of the duties imposed and authority conferred upon the Regional Co-ordinating Committees, except that it opposed the inclusion of any specific reference to allowances and accessorial services. It believes that the power of the co-ordinator should be definitely limited so that he could not issue any enforceable order or orders, except with respect to matters that have the approval of a majority of the members of the appropriate Regional Co-ordinating Committees. It is opposed to the inclusion in the bill of such provisions as those contained in Section 7, directing the co-ordinator to confer with representatives of railway labor organizations with respect to contemplated changes in service or operation, which will affect the interests of railway employees, before issuing any order requiring such change. It approves Section 9, provided it be amended to afford a reasonable period of time for interested parties to prepare and file petitions with the commission, requesting suspension of any order or orders issued by the co-ordinator. It approves Section 10, provided all reference to the Railway Labor Act be eliminated. It suggests that the Act specifically provide that the co-ordinator shall assist in bringing about the abandonment of branch lines of railroads and other railroad facilities where it is manifest that continuance of operation of such facilities is not economically justified.

Representative Celler, of New York, on May 3 introduced in the House a bill, H.R. 5484, "to provide for the establishment of a Federal Railroad Corporation, to provide for the redistribution of the executive, administrative, and judicial functions of railroad operation and control among proper and separate agencies, to provide for the vesting of executive responsibilities and management and control of railroads among the railroads of this country, under regulation and control that will stimulate the transportation industry under supervision that will again permit individual initiative and successful operation, etc."

It is generally understood that this represents a plan long advocated by Theodore H. Prince, of New York, which he recently submitted to Secretary Roper of the Department of Commerce.

NEWS

Canadian Railway Bill Passed by Parliament

Measure, introduced two months ago, designed to implement report of Duff Commission

After nearly four weeks of intermittent debate the bill passed by the Canadian Senate last November and introduced in the House of Commons at Ottawa two months ago by Hon. Robert J. Manion, Minister of Railways, to implement the report of the Duff Commission on the Canadian railway situation was given final passage in the House this week, the motion for third reading carrying by a vote of 84 for and 47 against. With the exception of A. W. Neill, of Vancouver Island, the Liberals voted solidly against the motion together with the Progressives and Labor members, with two exceptions.

On the final day of debate in the House this week further and strenuous efforts were made by the Labor members to get incorporated in the bill ampler provision for protection of the employees of the roads, but they were all rejected. J. S. Woodsworth (Winnipeg Labor member) moved an amendment to provide for compensation to men laid off as a result of joint economies on the part of the Canadian National and Canadian Pacific. This amendment was ruled out of order by the Speaker, but when challenged his ruling was sustained by a vote of 74 to 32. Another similar amendment moved by A. A. Heaps, another Winnipeg Labor member, was also ruled out of order.

Hon. W. R. Motherwell, a Saskatchewan Liberal, vigorously assailed the legislation, declaring that the provision whereby all the powers of administration of the Canadian National Railways were to be transferred from Parliament and Government to a board of trustees would enable the Government, through the trustees, to dismantle the Hudson Bay Railway, a road built at the demand of Western grain growers. Dr. Manion, the Minister, said any Government would be foolish to take such step in view of all the money, over \$50,000,000, that had been spent on the road and its ocean terminals at Fort Churchill.

"I do not believe that now is the time to pick out one particular class of men," said Hon. Dr. Manion, in reply to various speeches in criticism of the railway legislation, "and give compensation to them when they are laid off while other men and even men in the same particular class, railway men who have been laid off previously, are not being taken care of." Pointing to the economies already effected

in the salary bill of the Canadian National, Dr. Manion told the House that some officers who were drawing \$30,000 per annum were cut to \$18,000, and he also declared that salary economies among officers drawing over \$3,000 amounted alone to about \$2,000,000, as compared with the previous year.

Pennsylvania to Have Century of Progress Train

The Pennsylvania has renamed its Mercantile Express operating between Chicago and New York "The Progress Limited" in honor of the Century of Progress Exposition to be held in Chicago from June 1 to October 30.

Savings Bank Requirements Again Eased

Governor Lehman of New York has approved an amendment to the New York State banking law so as to continue railroad bonds as legal investments for savings banks until 1934. This is the second time that the provisions of the law requiring that fixed charges be earned 1.5 times to make bonds legal investments has been extended to meet the emergency.

Great Lakes Shippers' Advisory Board Meeting

The Great Lakes Shippers' Regional Advisory Board will hold its regular meeting at the Cleveland Hotel, Cleveland, Ohio, on May 18. In accordance with the broadening of the activities of the board, as recently decided upon, the meeting will discuss general economic as well as transportation questions, including President Roosevelt's proposals for railroad legislation.

Route of the Royal Scot

The Royal Scot, British train which the London, Midland & Scottish of Great Britain has brought to this country for the Century of Progress Exposition at Chicago, will, upon leaving New York, May 13, be exhibited at the following cities: Newark, N. J., May 14; Trenton, May 15; Atlantic City, May 15; Philadelphia, Pa., May 16; Wilmington, Del., May 17; Baltimore, Md., May 17; Washington, D. C., May 18; York, Pa., May 19; Harrisburg, May 19; Pittsburgh, May 21; Youngstown, Ohio, May 21; Akron, May 21; Columbus, May 22; Dayton, May 23; Cincinnati, May 24.

From Cincinnati the train will proceed to Chicago in order to be there by May 27 and thus be on exhibition when President Roosevelt visits the fair. The original schedule called for additional exhibition stops en route and arrival at Chicago on May 30.

General Atterbury Urges Nation-wide Consolidation

Pennsylvania President Speaks at Annual Convention of U. S. Chamber of Commerce

A plan of nation-wide consolidation of railroads was advocated by Gen. W. W. Atterbury, president of the Pennsylvania, in an address on "The Railroads' Relation to Business Recovery," at the annual convention of the Chamber of Commerce of the United States on May 4. He also said that eventually rates must come down but that this is impossible until economies are effected. As a means for relieving unemployment he suggested a program of grade crossing eliminations. Outlining the great extent to which governmental actions and policies are responsible for having brought about the existing railroad situation, General Atterbury said that governmental intervention in rates and wages has given us (1) a scale of rates which shippers constantly complain are higher than one under which the traffic of the country could prosper; but (2) still not high enough to support the railroads under the governmentally determined wage scales.

He suggested the following relief measures:

1. Acceptance of the principle that there is a relationship between rates and wages, and that the control of both must be so tied together that the governmental body which has the responsibility of regulating the one must not only have first-hand knowledge of the other but also its control.

2. Assistance by the government, in the form of long-term low-rate financing, to carry the railroads along until safely stabilized by new methods of organization and the revival of business.

3. The regulation applied to the railroads should be more liberalized and brought back to its original basis, and then all competing forms of transportation should be regulated on an equal basis with the railroads. The regulative authority should be the Interstate Commerce Commission. Regulation of the various transport instrumentalities can not be properly, equitably, or to the greatest advantage of the public, carried out with responsibility divided.

4. The appointment of a railroad coordinator as a temporary expedient, pending permanent re-grouping of the railway lines.

5. Ultimate consolidation of all railroads into a very limited number of systems, in the interest of efficiency and economy; conserving competition between the great terminals only and abolishing it at inter-

(Continued on page 706)

Three Months Rail Net an 0.67 Per Cent Return

Figure of \$33,909,385 Compares
with \$65,478,083 or 1.29
per cent in 1932

Class I railroads of the United States for the first three months of 1933 had a net railway operating income of \$33,909,385 which was at the annual rate of return of 0.67 per cent on their property investment, according to reports compiled by the Bureau of Railway Economics. In the first three months of 1932, their net was \$65,478,083, or 1.29 per cent. Operating revenues for the three months totaled \$655,232,659, compared with \$820,803,386 for the same period in 1932, or a decrease of 20.2 per cent. Operating expenses amounted to \$527,334,364, compared with \$653,162,870 for the same period in 1932, or a decrease of 19.3 per cent. Class I railroads in the first three months of 1933 paid \$65,880,414 in taxes compared with \$72,873,871 for the same period in 1932, or a decrease of 9.6 per cent. For March alone, the tax bill amounted to \$22,284,333 a decrease of \$2,615,459 under March, 1932.

Seventy-three Class I railroads failed to earn expenses and taxes in the first three months of 1933, of which 18 were in the Eastern district, 14 in the Southern and 41 in the Western.

Class I railroads for March alone had a net of \$10,548,004 which, for that month, was at the annual rate of return of 0.52 per cent. In March, 1932, their net was \$32,611,343 or 1.61 per cent. Operating revenues for March amounted to \$217,599,458, compared with \$285,921,638 in March, 1932, a decrease of 23.9 per cent. Operating expenses totaled \$175,295,277, compared with \$218,580,124 in the same month in 1932, or a decrease of 19.8 per cent.

Class I railroads in the Eastern district for the first three months had a net of \$36,976,599, at the rate of 1.55 per cent. For the same period in 1932, their net was \$51,615,363, or 2.17 per cent. Operating revenues in the Eastern district for three months totaled \$341,947,111, a decrease of 20.1 per cent, while operating expenses totaled \$259,680,810 a decrease of 20.8 per cent. Railroads in the Eastern district for March had a net of \$10,723,598, compared with \$22,913,081 in March, 1932.

Class I railroads in the Southern district for three months had a net of \$9,341,162, at the rate of 1.08 per cent. For the same period in 1932, their net amounted to \$7,409,936, at the rate of 0.85 per cent. Operating revenues in the Southern district for three months amounted to \$91,226,023, a decrease of 14.1 per cent, while operating expenses totaled \$70,920,949, a decrease of 18.5 per cent. Class I railroads in the Southern district for March had a net of \$3,281,118, compared with \$3,989,860 in March, 1932.

Class I railroads in the Western district for three months had a deficit of \$12,408,376. For the same three months in 1932, they had a net of \$6,452,784 at the rate of 0.35 per cent. Operating revenues in the Western district for the three

months amounted to \$222,059,525, a decrease of 22.6 per cent under the same period in 1932, while operating expenses totaled \$196,732,605, a decrease of 17.5 per cent compared with the same period in 1932. For March alone, the Class I railroads in the Western district reported a net operating deficit of \$3,456,712. The net railway operating income of the same roads in March, 1932, amounted to \$5,708,402.

CLASS I RAILROADS—UNITED STATES

	Month of March		Per cent Decline
	1933	1932	
Total operating revenues	\$217,599,458	\$285,921,638	23.9
Total operating expenses	175,295,277	218,580,124	19.8
Taxes	22,284,333	24,899,792	10.5
Net railway operating income	10,548,004	32,611,343	67.7
Operating ratio—per cent	80.56	76.45	...
Rate of return on property investment	0.52%	1.61%	...

Three Months Ended March 31			
Total operating revenues	\$655,232,659	\$820,803,386	20.2
Total operating expenses	527,334,364	653,162,870	19.3
Taxes	65,880,414	72,873,871	9.6
Net railway operating income	33,909,385	65,478,083	48.2
Operating ratio—per cent	80.48	79.58	...
Rate of return on property investment	0.67%	1.29%	...

Crescent Limited Accelerated

The "Crescent Limited" of the Southern now runs through between Washington, D. C., and Atlanta, Ga., 637 miles, in 15 hours, 5 minutes, one hour better than heretofore. The Crescent Limited, in the year ending April 25, reached Atlanta on time, southbound, on 360 days and reached Washington, northbound, on time 357 days. This train, the fastest between New York and New Orleans, has just completed its eighth year.

Rivers and Harbors Expenditures Proposed

The House rivers and harbors committee has reported the \$98,000,000 rivers and harbors bill introduced by Chairman Mansfield of the committee and has sent it to the White House for consideration in connection with the President's proposed public works bill. The bill includes 130 projects and would authorize expenditure of \$17,500,000 for the Tennessee river, \$10,000,000 for the Cape Cod Canal, \$11,650,000 for the upper Mississippi river, and other large amounts for Great Lakes harbors in anticipation of the St. Lawrence seaway improvement.

Southern's Bargain Fares Attract Patronage

More than 22,000 passengers took advantage of the "train travel bargain fares" which were in effect between all points on the Southern during the Easter holidays, April 10 to 15 inclusive. Of this total approximately 20,000 passengers availed themselves of the one-cent-per-mile fares which were in effect on April 14 and 15.

The Easter holiday fares were the first of a series of similar special rate excursions which the Southern plans during the remainder of 1933. On round-trip Pullman tickets a reduction of 25 per cent from regular Pullman rates is also available in connection with the Southern's reduced fares.

Four Motor Laws Passed by Tennessee Legislature

Extensive regulatory control, new size and weight limits and mileage fees provided

Regulation of highway transport, including control over the traffic soliciting activities of so-called "motor transportation agents" and "motor freight brokers" as well as reduced motor vehicle size and weight limitations and payments by motor carriers for their use of the public highways, is provided in four laws recently enacted in Tennessee. The regulatory law became effective upon its passage; the law fixing fees is to become effective within 30 days and the size and weight specifications act on January 1, 1934. The fourth law, which became effective April 21, deals with reciprocal agreements with respect to motor vehicles which the Tennessee commissioner of finance and taxation is authorized to enter with officials of bordering states.

The regulatory law embraces comprehensive control over all motor carriers, stipulating, in Section 20, that "any doubt as to the existence or extent of a power conferred shall be resolved in favor of the existence of the power, to the end that the railroad and public utilities commission may effectively govern and control operation of motor carriers in the public interest." The usual exemptions are provided for school and church buses, taxicabs, intra-city vehicles, vehicles used in delivering milk and vehicles making only casual trips for hire when such service is solicited by the party served.

Rates of all motor carriers—common or contract—are required to be just and reasonable and minimum rates of contract haulers must "not be less than the rate prescribed for common carriers for substantially the same service." In addition to its rate powers the commission has authority to regulate all common carrier schedules and services, to require the filing of reports and other data, to prescribe accounting rules and forms and in general "to supervise and regulate motor carriers in all matters affecting the relationship between such motor carriers and the public." In granting the certificates of convenience and necessity, which common carriers are required to obtain, the commission is directed, among other things, to give "reasonable consideration to the transportation service being furnished by any railroad, street railroad or motor carrier" operating in the territory involved.

Interstate carriers are required to obtain a permit, in deciding upon the granting of which it is stipulated that "the commission shall give reasonable consideration to the nature of the highways over which the permit is applied for, to the effect of such operation thereon and upon the traveling public using such highways; and to the nature and character and probable condition of the vehicles to be used on said highway."

The commission's power over contract haulers extends to the fixing of rates and fares and the supervision of schedules, classifications and accounts. Permits are

required for this type of operation and rules governing the granting of such permits are similar to regulations covering the issuance of certificates to common carriers. All carriers operating under permits are required to pay fees to cover the costs of administering the law; in this connection passenger carriers are assessed an annual charge of \$2.50 per passenger seat and freight carriers \$10 per ton of carrying capacity.

Other provisions with respect to operating companies require liability bonds or insurance, fix safety regulations and provide penalties for violations.

As stated at the outset the activities of motor transportation agents and motor freight brokers are brought within the law's regulatory provisions. The motor transportation agent is defined as anyone "negotiating for, soliciting by advertisement or otherwise, arranging as intermediary or otherwise, or who holds himself, or itself, out as one who sells, provides, furnishes or arranges for, transportation for any person or persons over the highways of this state upon a share-expense plan or for fixed compensation," whether in private motor vehicles or in vehicles of motor carriers. The term "motor freight broker" is used to designate anyone "engaged in contracting for transportation of property . . . where the person so contracting with the shipper or consignor is not himself or itself owner or operator of the agency of motor vehicle transportation used in the actual transportation but who arranged for such actual transportation by others . . ."

These agents and brokers are now required to obtain licenses to operate and to submit to certain regulations. They are assessed an initial license fee of \$50 and an annual renewal fee of \$25. In addition they must furnish an indemnity bond to insure the execution of contracts by the carriers they represent and liability insurance to protect persons and property transported by such carriers. A broker's or agent's license permits operation of such a business only at the one location designated on the license.

The title of the act relating to fees states, among other things, that it is "an act to require the operator of every motor vehicle using the highways of the State for the transportation of property to pay to the State reasonable compensation for the use of its highways . . ." With certain named exemptions such as vehicles operating within cities and surrounding areas, farm vehicles, etc., this act fixes mileage fees for motor trucks. All trucks of less than one-ton capacity and private trucks of less than three tons capacity are also exempt. Trucks of motor carriers, having more than one-ton but less than three tons capacity, pay one-half cent per mile operated, whether loaded or empty; trucks of three tons capacity pay one cent per mile. This act also provides for distinguishing license cards and markers and invests the Tennessee commissioner of finance and taxation with broad powers to enforce the payment of fees which it assesses.

The size and weight specifications law fixes a gross weight limit at 18,000 lb. and a length limit at 27 ft. for a single vehicle and at 35 ft. for a tractor-semi-trailer com-

bination; no trailers are to be allowed. The width limit is fixed at 8 ft., the height at 12 ft., and the speed limit at 35 m.p.h. Exemptions are provided for vehicles in the service of governmental agencies and for those operated within cities or the outskirts thereof. Also, provision is made for the issuance of special permits for special movements of oversized loads or vehicles. In this latter connection it is provided that applicants for such special permits "shall agree to and give bond with surety (unless the applicant shall by sworn statement furnish satisfactory proof of his solvency to the authority issuing the permit) to indemnify the state and/or counties thereof against damage to roads or bridges, resulting from the use thereof by the applicant." Section 9 invests any taxpayer of the state with the right by injunction proceedings "to enjoin any actual or threatened use of any highway prohibited by this Act."

The reciprocity law permits the Commissioner of Finance and Taxation to enter reciprocal agreements but stipulates that it "shall not authorize him to enter into any reciprocal agreement, the effect of which would be to permit regular operations of motor vehicles from border states or states adjoining Tennessee without Tennessee registration or license, the intent of this act being to authorize said commissioner to make such agreements as may permit occasional or temporary operation of such vehicles in Tennessee without the necessity of registration or license in Tennessee. . . ."

T. & T. Section Not To Meet

C. A. Plumly, chairman of the Telegraph & Telephone Section, American Railway Association, has announced that the Committee of Direction has decided to cancel the annual meeting of the section which was scheduled to be held at Chicago on June 13.

Rhode Island Law Limits Hours of Motor Vehicle Drivers

Hours of service limitations for operators of motor vehicles in Rhode Island are provided in a law recently passed by the legislature of that state. The law stipulates that no driver of a motor truck or public service vehicle will be permitted to remain on continuous duty for more than 12 hours and that a driver who has been on continuous duty for 12 hours must be afforded at least eight consecutive hours off duty. Further, no driver is to be permitted to remain on duty for more than 16 hours in any 24-hour period and after a driver has thus been on duty for 16 hours he must be relieved for a 10-hour period.

Firemen and Enginemen at Odds In Canada

The board of conciliation and investigation dealing with the dispute between the Brotherhood of Firemen and Enginemen and the Brotherhood of Locomotive Enginemen in the employ of the Canadian Pacific met this week in Montreal and heard the submissions of the contesting parties. The dispute concerns the rules governing the regulation of mileage and the conditions under which demoted engineers may take positions as firemen.

Howard Lynch, vice-president of the Brotherhood of Locomotive Firemen and Enginemen, told the board that under the existing agreement with the company and the enginemen, the enginemen revert to firemen as soon as their average mileage drops below 3,200 miles per month. Such engineers, reverting to the firing, were causing distress by displacing firemen. The rule, he thought to be unfair, and asked that the enginemen contribute more mileage to the benefit of the firemen.

George Hodge, head of the personnel department, Canadian Pacific, presented the view of the railway company that this was an internal matter between the two unions, and not one in which the company was directly concerned.

L. & N. Extends Store-Door Services

Results of the pick-up and delivery freight service on the Louisville & Nashville, in operation now for little more than a month, have been sufficiently encouraging to warrant extension of the free service from 230 to 360 miles from the shipping point, says a recent announcement by freight traffic officers of that road. The enlarged plan goes into effect on May 10.

In addition to extending the mileage limits on which there is no extra charge for picking up and delivering freight at the store door, other stations are being added to the list of those where the service is available. Also, beverages containing not more than 3.2 per cent of alcohol by weight, originally in the excepted class, will soon be included in the service.

Details of this collection and delivery service of the L. & N. and other southeastern roads were published in the Motor Transport Section of the *Railway Age* of April 22, page 595.

Reduced Fares on N. & W.

Fare at one cent per mile between stations in the greater part of Norfolk & Western territory and to points in eight southeastern states will be available on May 27, 28 and 29. The tickets, which will have a final return limit of June 3, will be good on all trains and in Pullman cars with a reduction of 25 per cent in Pullman charges.

The one cent rate will be applicable to all N. & W. stations from Williamson, W. Va., and between stations east thereof, and to destinations in the following southeastern states: Alabama, Florida, Georgia, Kentucky, Louisiana (east of the Mississippi River), Mississippi, South Carolina and Tennessee. The rate will also apply to Washington, D. C.

In addition, reduced fares will also be sold on the same dates from Williamson and stations east to Baltimore, Md., Atlantic City, N. J., Philadelphia, Pa., and New York.

Kansas City Southern to Co-ordinate Rail and Truck Service

A co-ordinated rail and truck service for the handling of l.c.l. freight will soon be inaugurated in Louisiana by the Kansas City Southern through a newly organized subsidiary, the Kansas City Southern Transport Company. The transport company will operate as a common carrier of freight between stations named in its tariff, performing a complete service from

store-door at the point of origin to store-door at the point of destination. It will issue its own bills of lading and will do its own waybilling and accounting.

Owning no equipment, the transport company will contract with local draymen for motor truck service to carry out the pick-up and delivery work, and will contract with the Kansas City Southern Railway for the movement of its freight from station to station. The station facilities of the railway will be used by the transport company, the freight agents acting jointly as agents of both the railway and its subsidiary.

The Canadian Roads in March

Gross revenues of the entire Canadian National system in March were \$11,399,215, a decrease of \$2,856,290 as compared with March, 1932. Operating expenses, totaling \$11,654,522 showed a decline of \$2,104,083 as compared with the operating figures for March one year ago, leaving a net revenue deficit of \$255,307 in March 1933, as against net revenue of \$496,900 in the same month of last year, a decline of \$752,207.

For the three months since the first of the calendar year, gross revenues of the Canadian National were \$30,578,027, a decline of \$9,077,277 from 1932. Operating expenses were \$34,601,270, as compared with \$40,984,855, a saving of \$6,383,585. For the three months of 1933 there was a net revenue deficit of \$4,023,243 as compared with a deficit of \$1,329,551 for the corresponding period in 1932, an increase in net deficit of \$2,693,692.

Revenues of the Canadian Pacific in March were \$8,800,156, a reduction of \$1,472,630 from the \$10,272,786 reported a year ago. Operating expenses were reduced by \$1,179,624, to \$7,922,660, leaving net for the month at \$877,495, as compared with \$1,170,502 a year ago, a decline of \$293,006.

For the first quarter, expenses were reduced by \$4,227,396, offsetting in some measure the reduction of \$4,947,331 experienced in revenues which were \$25,572,705 for the period. Net revenue at \$1,297,479 showed a reduction of \$719,935 from the \$2,017,415 reported for the first quarter of last year.

Senate Bill Proposes to Limit Salaries

The Senate had a lot of fun on May 4 in passing the bill to provide for the purchase by the Reconstruction Finance Corporation of securities of insurance companies with an amendment prohibiting in future R. F. C. loans to companies paying salaries in excess of \$17,500. This amendment was offered by Senator Walsh, of Massachusetts, and was adopted after Senator Black, of Alabama, had attempted to reduce the figure to \$12,500.

The amendment provides that the Reconstruction Finance Corporation shall not make, renew, or extend any loan under the Reconstruction Finance Corporation Act, as amended, or under the Emergency Relief and Construction Act of 1932, (1) if at the time of making, renewing or extending such loan any officer, director, or employee of the applicant is receiving compensation at a rate in excess of \$17,500 per annum, and (2) unless at such time the

applicant agrees to the satisfaction of the corporation not to increase the compensation of any of its officers, directors, or employees to any amount in excess of \$17,500 per annum while such loan is outstanding and unpaid. For the purposes of this section the term "compensation" includes any salary, fee, bonus, commission, or other payment, direct or indirect, in money or otherwise, for personal services."

At the same time the Senate adopted an amendment to the R. F. C. act providing that the corporation may make loans to trustees of railroads which proceed to reorganize under the bankruptcy act of March 3. This was offered by Senator Dill at the request of the R. F. C. because there was no language in the original act specifically providing for loans to trustees. Senator Dill had also offered an amendment providing that no loans should be made to a railroad that did not agree to keep its salaries below \$25,000 or until the Interstate Commerce Commission had fixed the amount of its capitalization and the number of its officers, but withheld it after the Walsh amendment was adopted. The bill now goes to the House.

Annual Meeting of United States Chamber of Commerce

Resolutions adopted at the annual meeting of the Chamber of Commerce of the United States in Washington on May 5 included the following:

Railroads

Developments of the past year have brought out more forcibly than ever the importance of the financial problems of the railroads from the viewpoint of all interests concerned. There have been extensive adjustments of rates to meet the necessities of shippers and permit traffic to move. Further adjustments of this character should be promptly made.

To meet the present situation every practicable economy in railroad operation is obviously necessary. Emphasis should be placed upon responsibility of management for all operating costs and management should be given freedom to discharge this responsibility. Voluntary consolidations not unduly restrictive of competition should proceed.

The Chamber has heretofore pointed out the need for savings through better unification of terminal facilities and their joint use in appropriate cases. There is need for the application of the same principle through cooperative arrangements by pooling and otherwise. Such measures should be worked out by voluntary action of the carriers concerned with assistance of the government. Adequate provision should be made for shippers and other interests concerned to be informed of any proposed changes and to make known their views to the representatives of the carriers or public authorities. In dealing with questions of rates the quasi-judicial commission procedure should be maintained.

Government support of railroad credit in this emergency is justified by the public interest in the railroads and should be continued with due regard to the future financial prospects of each carrier.

Interstate Motor Buses

Interstate commerce by motor buses operating as common carriers has assumed large proportions. With respect to such buses there is at present no federal or state regulatory authority. The need for registration and regulation of motor buses engaged as common carriers in interstate commerce is recognized by the operators of such buses themselves. Congress should enact appropriate legislation.

Highway Construction

The cooperative investment by the states and the federal government in highways built to serviceable standards has become an important and wholesome national policy. Since the work is only partly done, funds in reasonably required amounts should be supplied to carry on without interruption until we have completed this part of the nation's transport facilities.

The principle that special taxes should be laid upon highway users to defray their fair share of the costs of highway work has been supported by the Chamber. Revenues so derived should be devoted to the purposes for which they are levied, and for which they are intended, and should not be diverted to other purposes.

The report of the committee on Competing Forms of Transportation was referred to the board of directors with a suggestion that upon the report, with its numerous recommendations, the Chamber should act by referendum.

Daniel C. Roper, Secretary of Commerce, in an address gave the first public official confirmation of the fact that the administration is "working upon a project for the establishment of a Federal Bureau of Transportation" and that "it is proposed to concentrate in one department the administrative work relating to all transportation agencies," although he gave no details of the plan, which has been before the President for his approval for some time. Later Secretary Roper said he was working on the executive order under which the plan, if approved, would be put into effect.

"Beginning with domestic problems with which we in the Department of Commerce are particularly concerned," he said, "I may mention the administration of certain phases of transportation. Here is a field, representing the second largest industry of the United States, in which greater co-ordination is urgently required. One of the underlying causes of our present economic maladjustment is our practice of concentrating on problems of production, while ignoring the equally important phases of distribution and consumption. Our equipment is sufficient to produce more than we can possibly utilize under present conditions. One essential step in correcting this lack of balance is to improve our methods of distribution. A reduction of the appalling wastes of distribution will contribute largely to increased consumption of the products of our industrial and agricultural enterprises.

"A large proportion of the defects in distribution systems have to do with transportation. A coordinated and replanned system of transportation will play an important part in adjusting production to the needs of consumers, and be less dangerous to investors. We are working upon a project for the establishment of a Federal Bureau of Transportation. Without going into details at this time, I may say that it is proposed to concentrate in one Department the administrative work relating to all transportation agencies and it is suggested that this unit also administer communications."

The program included a round table conference on "Problems of Highway Transportation" at which the various viewpoints were presented by C. O. Sherrill, vice-president of the Kroger Grocery & Baking Company; R. V. Fletcher, general counsel of the Association of Railway Executives; and T. R. Dahl, vice-president of the White Company. At another round table conference Daniel Willard, Jr., assistant to general counsel of the Baltimore & Ohio, discussed "Railroad Reorganization Problems," with particular reference to the new procedure under the recent amendments to the bankruptcy act, saying that the experience of the first roads to take advantage of the new procedure would be observed with great interest.

Sam Rayburn, chairman of the House committee on interstate and foreign commerce, read a paper on "Needed Transportation Legislation," and General W. W.

Atterbury, president of the Pennsylvania, presented a paper on "The Railroads' Relation To Business Recovery," which latter is abstracted in a news story appearing elsewhere in this issue.

Rate Investigation Hearing

Hearings before Division 8 of the Interstate Commerce Commission at which representatives of shippers of so-called "basic commodities" are urging general rate reductions have entered upon their third week. The hearing has been going on steadily since April 24 except that an adjournment was taken on Monday and Tuesday of last week and this week because of the commission's usual monthly conferences. To make up for it a second hearing was held simultaneously on some days. Commissioner Aitchison, presiding, has repeatedly tried to expedite the proceeding by avoidance of repetition and one day last week remarked that the fact that the ratio of freight rates to commodity prices had been increased by the reductions in the latter had been asserted 45 times.

A. L. Osborn, representing the Northern Hemlock & Hardwood Manufacturers' Association, said that those for whom he spoke believed that rates were unduly high in relation to prices but were opposed to any reduction until there has been a reduction in railroad labor and other costs, and did not want to see the railroads' purchasing power reduced. He made the point that large reductions in price have not stimulated sales.

Commissioner Eastman, in his testimony before the House committee on interstate and foreign commerce on the proposed railroad legislation, said he understood that the shippers' testimony would be concluded about May 17, that of the railroads in June, and that the commission would probably be able to decide the case before the summer recess. He said, however, that there are serious doubts as to whether Congress or the commission could reduce rates under present conditions. If the inflation program works out as intended by its proponents, he said, it may not be necessary to deflate rates, wages, or debts.

Atterbury Urges Nation-wide Consolidation

(Continued from page 702)

mediate points; and with due regard to employees thereby displaced.

"As alternatives to the suggested consolidation there would appear to me to be only two possibilities," he said. "One would be to follow the custom of the past; let deflation take its course; and hope, on precedent, for ultimate revival. As the second alternative, at the very opposite end of the scale, stands government ownership."

"Nationwide consolidation offers the hope of a way out—an escape from both the prolonged hardship of the 'do nothing' program, and from what I believe to be the certain disaster of government operation. The number of systems would be few. The grouping would be chiefly, but

not entirely, regional. Competition between main terminals and its abolition at intermediate points is suggested upon the theory that the character of the through service determines that of all service, including that supplied at intermediate points. Therefore, if the lines of the country are so re-grouped as to offer two—but in no case need there be more than two—optional competitive routes between the principal traffic centers, we shall retain whatever good is inherent in competition and at the lowest possible cost. At the same time, public fear of monopoly would be allayed.

"Such a plan of consolidation is the one which I advocate as best adapted to meet the situation which now exists. If intelligently followed I believe it will result in putting the railroads in a secure financial position; in producing the best service at the lowest practicable cost; and in stabilizing employment. It should be remembered that the position of labor is always far better in an industry enjoying such conditions than in one in which excessive competition leads to instability, even though temporarily a larger payroll may be supported.

"I do not believe that we should rush into such a plan, but should proceed at a reasonable pace. On the basis of the present volume of traffic, such a consolidated system of railroads would be operated with less employees than at present. But we can not afford to take any sudden or violent action which would overnight add a new cohort of jobless to the present vast army of the unemployed."

General Atterbury also made certain suggestions in reference to the subject of unemployment. "Suppose, simply to be concrete, we look to a period of five years in which to accomplish the consolidation work. On the Pennsylvania Railroad, which I assume to be typical, deaths and retirements would in that period eliminate about 11 per cent of the existing force, or not far from half of the probable reduction, under consolidation, on the basis of the existing volume of traffic. That would dispose of at least a part of our problem. Then, too, the railroads have accumulated a large deficiency of maintenance. If we could secure low-rate and long-term government financing it might be practicable to keep a large number of men busy for a substantial period, making up deferred repairs. Finally, there is at least a reasonable expectation that at some time in the future we shall be experiencing a material recovery in traffic. If that be so, it is probable that the men temporarily displaced would be re-absorbed.

"Consolidation would mean abandonment of considerable mileage and other facilities. The public would have a right to expect a corresponding scaling down in capital structure. Capital facing obsolescence through these causes, I believe, is also entitled to consideration.

"The system of railroads which exists in this country today was created to conform with the policy of maximum competition, enjoined by the government and demanded by the public. If that policy is now to be radically revised, in line with what I certainly believe to be sound progress in economic thought, the government and the public owe a moral duty of reason-

able consideration to those who in good faith and judgment have invested their services and savings in our existing system of rail transportation.

"I regard the prompt appointment of a co-ordinator as a temporary, but highly desirable, measure. His most immediate duty will doubtless be to permit early realization of certain substantial economies which the railroads are unable to effect without governmental action and approval. Beyond that, I assume that with the co-operation of the railroad managements he will commence to lay the foundation of the ultimate scheme of nationwide consolidations.

"To produce the best results in the public interest, the railroads should be authorized and encouraged to enter into all other forms of transportation in order that a truly co-ordinated nation-wide system may be developed, with each agency operating in the sphere through which it may serve the public to the greatest advantage and with the minimum of overlapping or duplication.

"There is currently wide discussion of the expenditure of governmental funds for public improvement and rehabilitation projects. In surveying the possibilities for sound expenditures of this kind, I believe that no field has more to recommend it than that of grade crossing eliminations where our railroads and highways intersect. These have become distinctly highway projects and the railroads should be no longer asked to contribute to them.

"When the railroad era began, over a hundred years ago, the newly constructed rail lines extended across the then existing turnpikes and other highways. Later, as the desirability of eliminating many of these crossings arose, it at first seemed proper that the railroads, which were responsible for existence of the intersections, should bear the cost of separating the grades. Now, however, the conditions are entirely reversed. Railroad lines are no longer being extended. They are being contracted. New highways, however, are being built in all directions in every part of the country, and across the existing railroad lines. In addition, the extent of highway traffic has grown to be so great that, taken into consideration with the reduction in the number of trains operated, a condition has been reached in which the eliminations of grade crossings are projects solely and simply for the benefit of highway users, and their costs should be met by funds derived as are the funds for highway construction.

"An army of men could, with profit to the nation, be put at work on eliminating the grade crossings now existing in this country. Many furloughed railroad men could be fitted in. This would be productive work of the highest order and of permanent value. It would be a factor creating useful work in every state in the nation. The greatest necessity for grade crossing elimination exists in the very places where unemployment is most severe. This is also work of a character in which the greater part of the expenditures go to labor. The direct expenditures for grade crossing eliminations average 60 per cent labor and 40 per cent material, and the latter, in the last analysis, means more labor."

Supply Trade

Harold B. Madison, field engineer of the **Clark Tractor Company**, Battle Creek, Mich., has been appointed branch manager, with headquarters at 467 Canal street, New York.

Merrill G. Baker, who recently resigned as president of the **Union Steel Casting Company**, Pittsburgh, Pa., has been appointed executive vice-president of the **Steel Founders' Society of America, Inc.**, New York.

The National Aluminate Corporation, Chicago, has moved its New York office to Room 2615, Graybar building. **H. A. Marshall** is eastern railway representative with headquarters at this New York office.

C. A. Sattley has been appointed representative of **The Winton Engine Corporation**, Cleveland, Ohio. Mr. Sattley is in charge of the Chicago territory, with office at 319 Peoples Gas building, Chicago. He succeeds **J. F. Sattley**, deceased, who previously represented **The Electro-Motive Company** and the **Winton Engine Corporation** in that territory.

The Worthington Pump & Machinery Corporation, Harrison, N. J., and the **Gamon Meter Company** have consolidated their operations in the manufacture and sale of meters, through the newly organized **Worthington-Gamon Meter Company**, with sales headquarters at Harrison; all manufacturing operations, however, will be concentrated in the Gamon plant at Newark. The officers are as follows: **E. T. Fishwick**, president; **G. H. Gleeson**, vice-president in charge of sales; **J. A. Bonnet**, secretary; **R. R. Anderson**, works manager.

F. D. Foote, who has been appointed assistant to vice-president on the staff of **C. L. Wood**, commercial vice-president of the **United States Steel Corporation**, with headquarters at New York, will, in



F. D. Foote

his new position, be responsible for the coordination of sales activities among railroads and railroad equipment industries. A sketch of Mr. Foote's career appeared in the *Railway Age* of May 6, page 680.

OBITUARY

Le Grand Parish, former president of the **American Arch Company, Inc.**, and the **Lima Locomotive Works, Inc.**, died at the **Hackensack Hospital** in **Hackensack, N. J.**, May 10, 1933. Since his retirement from the **American Arch Company** in February, 1926, he had taken an active interest in welfare and civic affairs in **Passaic County, N. J.**, and also traveled much in this country and abroad. Mr. Parish was born at **Friendship, N. Y.**, April 13, 1866. In September, 1887, he entered the laboratories of **Thomas A. Edison** where he remained until early in 1889 when he left to enter the service of the **Gilliland Electric Company**, **Adrian, Mich.** In 1891 he became a storekeeper on the **Lake Shore & Michigan Southern** at **Adrian, Mich.** Three years later he became chief clerk in the



Le Grand Parish

car department at **Englewood, Ill.**, and later was made general foreman at that point and then master car builder of the **Western division**, his jurisdiction in this capacity being extended in June, 1900, over the **Michigan division**, with his headquarters still at **Englewood**. In November, 1904, he was promoted to assistant superintendent of rolling stock, with headquarters at **Cleveland, Ohio**, and in July, 1906, became superintendent of motive power, remaining in that capacity until April, 1910, when he resigned to accept the presidency of the **American Arch Company**. In August, 1918, he was elected president of the **Lima Locomotive Works, Inc.**, remaining in that capacity, and also as president of the **American Arch Company**, until January, 1924, when he relinquished the presidency of the locomotive company. In February, 1926, he retired as president of the **American Arch Company, Inc.** Mr. Parish, while he was in railway service, was unusually active in the **Master Car Builders' Association** and the **American Railway Master Mechanics' Association**. He also served as president of the **Western Railway Club**. He possessed real genius as an organizer and as a developer of men, this being demonstrated in a very marked degree in his administration of the mechanical department of the **Lake Shore & Michigan Southern**. At the time of his death he was the vice-president of the park commission of

Passaic County, N. J., a member of which he had been since the organization of the commission in November, 1927.

TRADE PUBLICATION

CONCRETE FLOORS.—The **Portland Cement Association**, 33 West Grand avenue, Chicago, has issued two four-page folders entitled "Concrete Floors for Industrial Buildings" and "Concrete Floors—How to Build Them." Cost, durability, cleanliness, safety, smoothness, solidity, comfort and maintenance are discussed, and correct construction methods are fully explained. A working specification for bonded concrete floor finish has also been published and the Association's 24-page book "Concrete Floor Finishes," first issued in 1929, has been revised and reprinted.

Equipment and Supplies

FREIGHT CARS

THE INTERNATIONAL HARVESTER COMPANY is inquiring for prices on repairs to three hopper coke cars.

IRON AND STEEL

THE PENNSYLVANIA will place orders shortly for from 20,000 to 25,000 tons of new steel rail.

THE NEW YORK CENTRAL order for 9,000 tons of rail recently authorized by this railroad has been placed with the **United States Steel Corporation**; the purchase being financed largely by the railroad delivering to the **Steel Corporation** 30,000 tons of scrap steel and iron.

THE ELGIN, JOLIET & EASTERN has ordered 240 tons of structural steel to be used in the reconstruction of its bridge over the **Illinois waterway** at **Divine, Ill.**, from the **American Bridge Company**. The railroad is asking for bids on 2,400 tons of structural steel for a vertical lift span over the **Illinois waterway** at **Joliet**.

SIGNALING

BALTIMORE & OHIO.—This company has petitioned the **Interstate Commerce Commission** for a reconsideration and vacation of the orders issued in 1922 and 1924 under which the company is operating automatic train control on 195 locomotives and 4 rail motor cars between **Washington, D. C.**, and **Philadelphia, Pa.**

MISCELLANEOUS

THE NEW YORK CENTRAL has ordered 49 loco valve pilots from the **Valve Pilot Corporation**, for installation on **Hudson type locomotives**.

Financial

CENTRAL OF GEORGIA.—Abandonment.—The Interstate Commerce Commission has authorized the Receiver of this company to abandon that part of its line extending from a point 2.5 miles east of Savannah to the southern end of Tybee Island, Ga., 15.2 miles. The application resulted from a decline in traffic almost to the vanishing point, due to highway competition. Taxes paid on the line totaled \$7,080 in 1932.

CHESAPEAKE & OHIO.—Abandonment.—The Interstate Commerce Commission has authorized this company to abandon that part of its Potts Creek branch extending from a point near the plant of the Industrial Rayon Corporation, Alleghany County, Va., to the end of the branch at Bess, 16.8 miles. The application was occasioned by the decline in traffic practically to the vanishing point due to highway competition and general business conditions. Taxes paid on the line to be abandoned averaged \$2,694 annually during the past four years.

CHICAGO, BURLINGTON & QUINCY.—Annual Report.—The 1932 annual report of this company shows net income, after interest and other charges, of \$1,502,816, as compared with net income of \$13,319,735 in 1931. Selected items from the Income Statement follow:

	1932	1931	Increase or Decrease
Average Mileage Operated	9,261.96	9,312.69	-50.73
RAILWAY OPERATING REVENUES	\$79,543,629	\$111,218,960	-\$31,675,331
Maintenance of way	9,576,465	13,721,164	-4,144,699
Maintenance of equipment	13,341,550	17,785,942	-4,444,392
Transportation	28,952,905	38,030,549	-9,077,644
TOTAL OPERATING EXPENSES	58,517,604	77,465,969	-18,948,365
Operating ratio	73.57	69.65	+3.92
NET REVENUE FROM OPERATIONS	21,026,025	33,752,990	-12,726,965
Railway tax accruals	8,148,156	9,955,502	-1,807,346
Railway operating income	12,846,693	23,773,749	-10,927,056
Hire of Equip- ment— Net Dr.	1,223,759	987,165	+236,594
Joint facility rents— Net Dr.	2,030,437	2,279,67	-249,230
NET RAIL- WAY OPERAT- ING INCOME	9,592,497	20,506,918	-10,914,421
Non-operating income	1,362,919	2,299,074	-936,155
GROSS INCOME	10,955,417	22,805,992	-11,850,575
Interest on funded debt	9,084,635	9,084,635	.....
TOTAL DEDUCTIONS FROM GROSS INCOME	9,452,601	9,486,257	-33,656
NET INCOME	1,502,816	13,319,735	-11,816,919

CHICAGO, BURLINGTON & QUINCY.—New Director.—R. E. Wood, president of Sears, Roebuck and Co., has been elected a member of the board of directors of this com-

pany, to succeed Edward P. Bracken, who retired as executive vice-president and a director on January 1.

CHICAGO & NORTH WESTERN.—Trackage Rights.—The Interstate Commerce Commission has authorized this company to operate over the Minneapolis & St. Louis between Iowa Junction, near Peoria, Ill., and a point near Middle Grove, 27.5 miles.

CHICAGO, MILWAUKEE, ST. PAUL & PACIFIC.—Bonds.—This company has applied to the Interstate Commerce Commission for authority for the authentication and delivery of \$10,500,000 of first and refunding mortgage 6 per cent bonds to be pledged as collateral for a loan from the Reconstruction Finance Corporation or the Railroad Credit Corporation.

DELAWARE & HUDSON.—Notes.—The Interstate Commerce Commission has authorized this company to issue at not less than par not exceeding \$10,000,000 of 6 per cent promissory notes.

DENVER & RIO GRANDE WESTERN.—Abandonment.—The Interstate Commerce Commission has authorized this company to abandon a narrow gage line extending from Lake Junction, Colo., to Lake City, 35.8 miles.

DENVER & RIO GRANDE WESTERN.—Annual Report.—The 1932 annual report of this company shows net deficit, after interest and other charges, of \$2,584,210, as compared with net deficit of \$225,652 in 1931. Selected items from the Income Statement follow:

	1932	1931	Increase or Decrease
Average Mileage Operated	2,531.84	2,551.17	-19.33
RAILWAY OPERATING REVENUES	\$17,560,621	\$23,484,818	-\$5,924,197
Maintenance of way	1,822,743	2,703,660	-880,916
Maintenance of equipment	3,619,224	4,485,324	-866,100
Transportation	5,690,025	7,387,345	-1,697,320
TOTAL OPERATING EXPENSES	12,710,507	16,423,440	-3,712,933
Operating ratio	72.38	69.93	+2.45
NET REVENUE FROM OPERATIONS	4,850,114	7,061,378	-2,211,264
Railway tax accruals	1,905,000	1,905,000	.....
Hire of Equipment— Net Dr.	429,164	314,960	+114,203
Joint facility rents—Net Cr.	303,681	298,989	+4,692
NET RAILWAY OPERATING INCOME	2,814,269	5,137,991	-2,323,722
Other income	* 74,470	† 4,675	-79,145
Interest on funded debt	5,324,009	5,368,318	-44,309
NET DEFICIT	2,584,210	225,652	+2,358,558

*Debit. †Credit.

ERIE.—Bonds.—The Interstate Commerce Commission has authorized this company to issue \$5,000,000 of 6 per cent refunding and improvement bonds, series of 1932, in partial reimbursement for capital expenditures, the bonds to be pledged with the Railroad Credit Corporation as

collateral security for short term loans and the railroad's equity in any bonds pledged with the Reconstruction Finance Corporation is to be pledged with the Railroad Credit Corporation.

GRAND TRUNK WESTERN.—Abandonment.—The Interstate Commerce Commission has authorized this company to abandon operation under trackage rights over the Ann Arbor between Owosso Junction and Ashley, 20.5 miles.

HARTFORD EASTERN.—Abandonment.—The Interstate Commerce Commission has authorized this company to abandon operation as to interstate and foreign commerce of its entire line, 15.5 miles.

ILLINOIS CENTRAL.—Y. & M. V. Bonds.—The Interstate Commerce Commission has authorized the Yazoo & Mississippi Valley to deliver \$1,605,000 of improvement bonds, series Z, to the Illinois Central in satisfaction of indebtedness for advances.

INTERNATIONAL-GREAT NORTHERN.—Annual Report.—The 1932 annual report of this company shows net deficit, after interest and other charges, of \$2,430,180, as compared with net deficit of \$393,872 in 1931. Selected items from the Income Statement follow:

	1932	1931	Increase or Decrease
Average Mileage Operated	1,159.81	1,159.52	+0.29
RAILWAY OPERATING REVENUES	\$10,143,612	\$17,843,909	-\$7,700,298
Maintenance of way	1,267,833	2,381,758	-1,113,925
Maintenance of equipment	1,796,612	2,757,714	-961,102
Transportation	4,254,727	6,816,534	-2,561,807
TOTAL OPERATING EXPENSES	8,348,960	13,155,813	-4,806,853
Operating ratio	82.31	73.73	+8.58
NET REVENUE FROM OPERATIONS	1,794,651	4,688,096	-2,893,445
Railway tax accruals	438,594	499,299	-60,705
Railway operating income	1,346,620	4,182,206	-2,835,586
Hire of freight cars— Dr.	558,815	1,173,511	-614,695
Joint facility rents	85,395	89,883	-4,488
NET RAILWAY OPERATING INCOME	449,077	2,407,683	-1,958,606
Non-operating income	82,104	145,446	-63,342
GROSS INCOME	531,181	2,553,129	-2,021,948
Interest on funded debt	2,934,641	2,918,471	+16,170
TOTAL DEDUCTIONS FROM GROSS INCOME	2,961,360	2,947,000	+14,360
NET DEFICIT	2,430,180	393,872	+2,036,308

MISSOURI-KANSAS-TEXAS.—Operation over the Galveston, Houston & Henderson.—The Interstate Commerce Commission has authorized this company and the International-Great Northern to operate over the Galveston, Houston & Henderson between Galveston, Tex., and Houston, 49.5 miles, under agreements extending and supplementing existing agreements and to assume, in equal shares, obligation

for the interest on \$2,652,500 of first lien and refunding mortgage bonds, series A, of the G. H. & H.

KANSAS CITY SOUTHERN.—Annual Report.—The 1932 annual report of this company shows net deficit, after interest and other charges, of \$1,380,759, as compared with net income of \$376,297 in 1931. Selected items from the Income Statement follow:

	1932	1931	Increase or Decrease
Average Mileage Operated	882.81	883.20	-.39
RAILWAY OPERATING REVENUES	\$9,875,437	\$14,073,410	-\$4,197,973
Maintenance of way	1,019,372	1,342,698	-323,326
Maintenance of equipment	1,642,731	2,239,226	-596,496
Transportation	3,246,759	4,313,336	-1,066,577
TOTAL OPERATING EXPENSES	7,411,816	9,546,397	-2,134,581
Operating ratio	85.41	76.27	+9.14
NET REVENUE FROM OPERATIONS	2,463,621	4,527,014	-2,063,392
Railway tax accruals	1,023,125	1,187,937	-164,812
Railway operating income	1,437,671	3,336,595	-1,898,924
Equipment rents—Net Dr.	403,109	642,900	-239,792
Joint facility rents—Net Dr.	76,629	74,266	+2,363
NET RAILWAY OPERATING INCOME	957,933	2,619,429	-1,661,495
Non-operating income	931,454	794,876	+136,578
GROSS INCOME	2,369,124	4,131,471	-1,762,347
Rent for leased roads	166,367	58,631	+107,736
Interest on funded debt	2,700,420	2,710,213	-9,793
TOTAL DEDUCTIONS FROM GROSS INCOME	3,749,883	3,755,174	-5,291
NET DEFICIT	1,380,759	\$376,297	-1,757,056

* Income.

LONG ISLAND.—Annual Report.—The 1932 annual report of this company shows net income, after interest and other charges, of \$2,999,648, a decrease of \$2,101,677 over 1931. Selected items from the Income Statement follow:

	1932	Increase or Decrease
Average Mileage Operated	399.97	-4.14
Railway Operating Revenues	\$28,220,076	-\$7,816,326
Maintenance of way...	2,073,391	-1,238,893
Maintenance of equipment	3,866,903	-1,315,946
Transportation	11,724,214	-2,801,258
Total Operating Expenses	18,497,385	-5,461,044
Operating ratio	65.5	-1.0
Net Revenue from Operations	9,722,691	-2,355,282
Railway tax accruals	2,479,111	+1,098
Railway operating income	7,236,012	-2,346,281
Hire of equipment—Dr.	460,655	-149,828
Joint facility rents—Dr.	1,729,432	-24,593
Net Railway Operating Income	5,045,925	-2,171,860
Non-operating income	554,367	-72,761
Gross Income	5,600,293	-2,244,622
Rent for leased roads	60,000	.....
Interest on funded debt	2,172,906	-190,488
Total Deductions from Gross Income	2,600,645	-142,945
Net Income	2,999,648	-2,101,677

MINNEAPOLIS & ST. LOUIS.—Receiver's Certificates.—The Interstate Commerce Commission has authorized the receiver for this line to issue \$950,000 of receiver's certificates to renew or extend maturing certificates of like amount.

MISSOURI PACIFIC.—Abandonment of Operation.—The Interstate Commerce Commission has authorized this company to abandon operation under trackage rights over the St. Louis-San Francisco between Van Buren, Ark., and Fort Smith, 1.5 miles.

MONONGAHELA.—Acquisition.—The Interstate Commerce Commission has authorized this company to acquire the railroads and properties of the Scotts Run Railway (16.8 miles) in Monongalia County, W. Va.; several short segments of the Monongahela & Ohio R. R. (3.5 miles) in Greene County, Pa.; and the line of the Indian Creek & Northern from Lowville, W. Va., to Arnettville, 3 miles.

SOUTHERN RAILWAY.—Annual Report.—The 1932 annual report of this company shows net deficit, after interest and other charges, of \$11,218,507, as compared with net deficit of \$5,922,842 in 1931. Selected items from the Income Statement follow:

	1932	1931	Increase or Decrease
Average Mileage Operated	6,708.95	6,730.48	-21.53
RAILWAY OPERATING REVENUES	\$72,986,542	\$97,715,112	-\$24,728,570
Maintenance of way	10,390,253	15,028,650	-4,638,397
Maintenance of equipment	16,802,044	20,429,088	-3,627,044
Transportation	28,024,509	37,168,431	-9,143,922
TOTAL OPERATING EXPENSES	60,865,040	79,783,959	-18,918,919
Operating ratio	83.39	81.65	+1.74
NET REVENUE FROM OPERATIONS	12,121,502	17,931,152	-5,809,650
Railway tax accruals	6,022,932	7,317,318	-1,288,386
Hire of equipment	704,836	1,260,785	-555,949
Joint facility rents	970,527	1,057,603	-87,076
NET RAILWAY OPERATING INCOME	4,406,269	8,281,106	-3,874,837
Non-operating income	1,900,082	3,247,789	-1,347,707
GROSS INCOME	6,306,350	11,528,896	-5,222,546
Rent for leased roads	2,430,769	2,517,220	-86,451
Interest on funded debt	13,176,634	12,728,630	+448,004
NET DEFICIT	11,218,507	5,922,842	+5,295,665

SOUTHERN PACIFIC.—R.F.C. Loan.—Division 4 of the Interstate Commerce Commission on May 9 approved a loan of \$22,000,000 from the Reconstruction Finance Corporation for the purpose of paying judgments in connection with the operation of the Spindletop oil field, principal of maturing equipment trust certificates, and interest on funded debt. It also approved a "work loan" of \$1,200,000 to be used in constructing a new passenger station and terminal facilities at Houston, Tex.

ST. LOUIS SOUTHWESTERN.—Annual Report.—The 1932 annual report of this company shows net deficit, after interest and other charges, of \$3,471,325, as compared with net deficit of \$291,917 in 1931. Selected items from the Income Statement follow:

	1932	1931	Increase or Decrease
Average Mileage Operated	1,913.54	1,913.54	.....
RAILWAY OPERATING REVENUES	\$12,554,433	\$17,950,372	-\$5,395,939
Maintenance of way	1,838,052	1,963,175	-125,123
Maintenance of equipment	2,117,995	2,613,083	-495,088
Transportation	4,562,257	5,930,225	-1,367,968
TOTAL OPERATING EXPENSES	10,535,231	12,659,230	-2,123,999
Operating ratio	83.92	70.52	+13.40
NET REVENUE FROM OPERATIONS	2,019,202	5,291,142	-3,271,939
Railway operating income	1,030,493	4,220,892	-3,190,398
Hire of freight cars— Dr.	805,290	1,208,946	-403,656
Joint facility rents	400,843	401,825	-982
NET RAILWAY OPERATING INCOME	186,791	2,607,346	-2,794,137
Non-operating income	83,275	136,657	-53,381
GROSS INCOME	103,516	2,744,003	-2,847,518
Interest on funded debt	3,094,049	2,594,840	+499,209
TOTAL DEDUCTIONS FROM GROSS INCOME	3,367,809	3,035,919	+331,890
NET DEFICIT	3,471,325	291,917	+3,179,408

TEXAS & PACIFIC.—Bonds.—This company has applied to the Interstate Commerce Commission for authority for the authentication and delivery of \$19,730,000 of general and refunding mortgage 5 per cent bonds. It is proposed to sell \$13,000,000 and pledge the remainder.

WESTERN MARYLAND.—Bonds.—The Interstate Commerce Commission has authorized this company to issue \$1,659,000 of first and refunding mortgage 5½ per cent, series A, bonds in lieu of the same amount of 5 per cent bonds, to be pledged as collateral security for short term notes.

Average Prices of Stocks and of Bonds

	May 9	Last week	Last year
Average price of 20 representative railway stocks	31.82	33.00	18.24
Average price of 20 representative railway bonds	60.31	59.31	56.83

Dividends Declared

Boston & Albany.—\$2.50, quarterly, payable June 30 to holders of record May 31.
 Catawissa.—First preferred, \$1.25, semi-annually; second preferred, \$1.25, semi-annually, both payable May 20 to holders of record May 9.
 Cincinnati, New Orleans & Texas.—Preferred, \$1.25, quarterly, payable June 1 to holders of record May 16.
 Delaware & Bound Brook.—\$2.00, quarterly, payable May 20.
 Northern Railroad of N. J.—4 Per Cent Guaranteed, \$1.00, quarterly, payable June 1 to holders of record May 20.
 Reading Company.—Second preferred, 50c, quarterly, payable July 13 to holders of record June 22.
 West Jersey & Seashore.—Common, \$1.50, semi-annually, payable July 1 to holders of record June 15.

Railway Officers

EXECUTIVE

F. E. Williamson, president of the New York Central, has been elected president also of the Toronto, Hamilton & Buffalo, a subsidiary of the New York Central, to succeed the late **J. N. Beckley**.

W. R. Stephens, vice-president of the Minneapolis, Northfield & Southern, has been elected chairman of the board, a newly-created position, with headquarters as before at Minneapolis, Minn. **G. C. Wright**, traffic manager, has been elected president, with headquarters also at Minneapolis, succeeding **Harry E. Pence**, deceased.

FINANCIAL, LEGAL AND ACCOUNTING

Thomas P. Healy, associate general solicitor of the New York Central, at New York, has been appointed general solicitor to succeed the late **Clyde Brown**.

Charles E. Mekota, an adjuster in the claim department of the Chicago, Rock Island & Pacific, has been promoted to general claim agent, with headquarters at Chicago, to succeed **James S. Palmer**, deceased.

George J. Bergevin has been appointed auditor of the Detroit & Mackinac, with headquarters at Tawas City, Mich., in which position he will take over a portion of the duties formerly discharged by **John McCray**, vice-president, general manager and auditor, deceased.

E. E. McInnis, general solicitor of the Atchison, Topeka & Santa Fe, who has been promoted to general counsel, has been engaged in legal work for the Santa Fe for 12 years. He was born on October 12, 1882, at Monticello, Miss., and was educated at Austin College, Sherman, Tex., and the University of Texas, being graduated from the latter in 1904. Mr. McInnis entered railway service in 1921 as an attorney for the Santa Fe at Oklahoma City, Okla., serving there until 1922. He was then appointed solicitor for Oklahoma, with the same headquarters, which position he held until 1926 when he was advanced to general solicitor at Chicago. Mr. McInnis served in the latter capacity until his recent appointment as general solicitor, with headquarters remaining at Chicago.

C. E. Betts, assistant general auditor of the Atchison, Topeka & Santa Fe, who has been promoted to general auditor, as noted in the *Railway Age* for May 6, has been connected with the accounting department of the Santa Fe for 27 years. He was born on July 29, 1870, at Litcham, England, and came to this country in 1888, entering railway service four years later as chief clerk on the Wisconsin Central (now part of the Minneapolis, St. Paul & Sault Ste. Marie). In April, 1907, Mr. Betts entered the service of the Santa Fe

as general accountant at Chicago, and from July 1, 1918, to the termination of federal control of the railroads he served as auditor with the same headquarters.



C. E. Betts

On March 1, 1920, he was advanced to assistant general auditor at Chicago, which position he was holding at the time of his recent promotion to general auditor.

OPERATING

F. M. Brown has been appointed superintendent of the Pittsburgh, Chartiers & Youghiogheny, with headquarters at Pittsburgh, Pa.

C. E. Weaver, assistant general manager and chief engineer of the Central of Georgia, has been appointed general manager and chief engineer.

C. A. Pinkerton, general superintendent of the Detroit & Mackinac, with headquarters at Tawas City, Mich., on May 1 was placed in complete charge of the property, reporting to the president, thereby succeeding to a portion of the duties of **John McCray**, vice-president, general manager and auditor, deceased.

U. V. Mace has been appointed assistant superintendent of the Rutland with headquarters at Rutland, Vt., and **John A. White** has been appointed trainmaster at Rutland. **G. B. Gowen** has been appointed chief train dispatcher and **J. H. Hunt** has been appointed terminal agent at Ogdensburg, N. Y.

H. J. Humphrey, assistant to vice-president of the Canadian Pacific, has been appointed general manager of eastern lines succeeding **J. J. Scully** who relinquishes that position because of ill health. **W. A. Mather**, general superintendent of the Alberta district, with headquarters at Calgary, Alta., has been appointed to succeed Mr. Humphrey as assistant to the vice-president with headquarters at Montreal, Que.

J. W. Boyd, chief engineer of the Monongahela, has been appointed superintendent with headquarters at Brownsville, Pa. **J. K. Yohe** has been appointed trainmaster with headquarters at South Brownsville, Pa., succeeding **E. W. Jeffries** who has been appointed assistant general yard master, with the same headquarters. **S. Cameron**, superintendent of freight transportation, has been appointed chief dis-

patcher and car distributor with headquarters at Brownsville, as before.

MECHANICAL

S. W. Inks, general foreman locomotive department of the Pittsburgh & Lake Erie, has been appointed master mechanic of the Monongahela with headquarters at South Brownsville, Pa.

E. R. Battley, superintendent of shop methods of the Canadian National, has been transferred to the central region as general superintendent of motive power and car equipment. Mr. Battley's former position has been abolished and his former duties taken over by **Frank Williams**, mechanical engineer in charge of shop methods.

PURCHASES AND STORES

M. S. Smith has been appointed storekeeper of the Monongahela with headquarters at South Brownsville, Pa.

OBITUARY

R. W. Taylor, assistant signal engineer of the Baltimore & Ohio, died on May 7, at his home in Baltimore, Md.

Nelson H. Loomis, retired general solicitor of the Union Pacific, died at Omaha, Neb., on May 8. He was 71 years old and had retired on January 3, after 48 years of service with that road.

John McCray, vice-president, general manager and auditor of the Detroit & Mackinac, with headquarters at Tawas City, Mich., died on April 6 of heart disease.

O. F. Scudder, real estate agent of the Chicago, Burlington & Quincy, with headquarters at Chicago, died on May 8 following an illness of several months. Mr. Scudder, who was born at Galesburg, Ill., on December 24, 1871, entered railway service in 1887 as an office and messenger boy on the Burlington at Galesburg. In 1894 he was promoted to claim agent at Chicago, where he was advanced to right-of-way agent in the land department in 1904 and thence to assistant land and industrial commissioner five years later. In 1914, Mr. Scudder was promoted to land and industrial commissioner of Lines East, his title being changed to real estate agent in 1932.

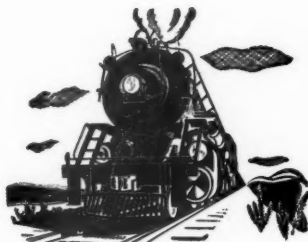
James S. Palmer, general claim agent of the Chicago, Rock Island & Pacific, with headquarters at Chicago, died on April 28 as the result of injuries received in an accident. Mr. Palmer was born on November 3, 1876, at Manchester, N. H., and entered the service of the Rock Island in 1894 in the operating department. In 1901 he entered the claim department as a stenographer for the claims attorney and in the following year he was appointed adjuster in Iowa, Minnesota and South Dakota. He was advanced to claim agent at Des Moines, Iowa, in 1913 and two years later he was made general claim agent, which position he was holding at the time of his death.

Tables of Revenues and Expenses of Railways begin on next left-hand page

EFFICIENT RAILROADING

necessitates

NEW POWER



Freight Locomotives, 25 years old, belong to a

bye-gone day. The old locomotive is no longer

adequate to carry out modern operating policies.

Today's high speeds and heavy loadings make

old power obsolete.

Scrap it before it wastes more railroad dollars.

LIMA LOCOMOTIVE

LIMA



WORKS, INCORPORATED

OHIO

Revenues and Expenses of Railways

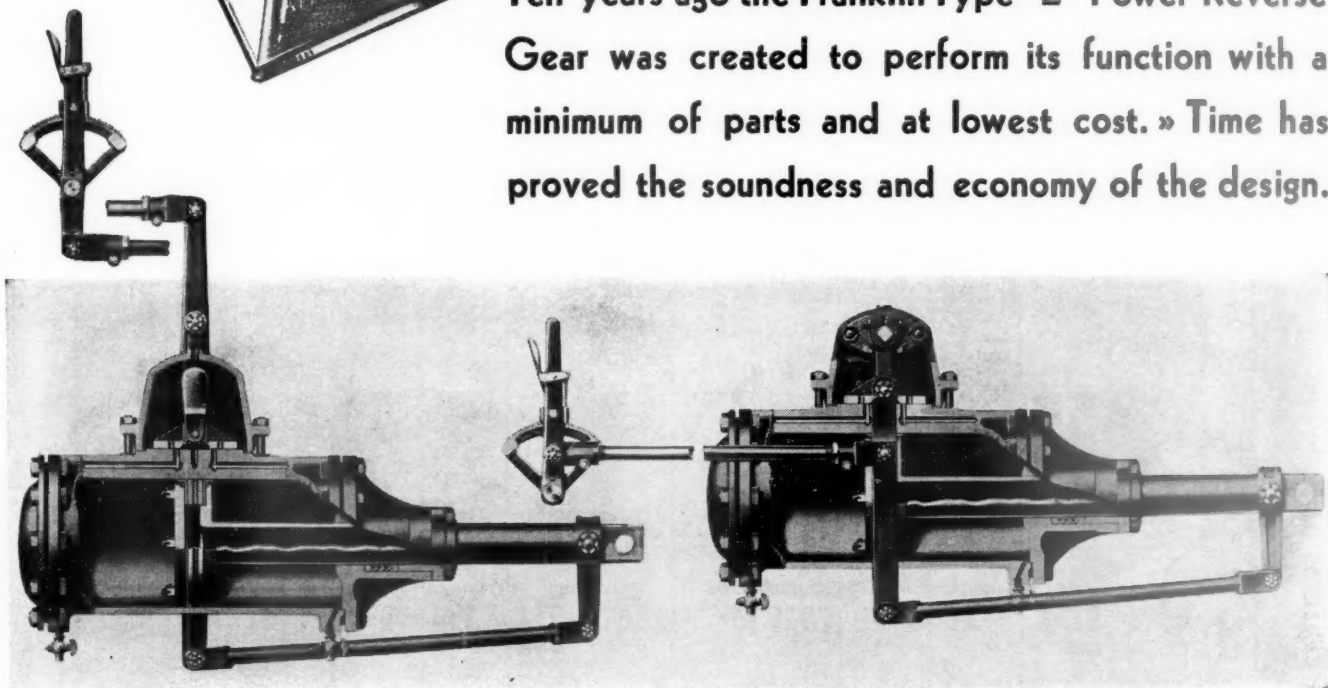
MONTH OF MARCH AND THREE MONTHS OF CALENDAR YEAR 1933

Name of road	Av. mileage operated during period	Operating revenue			Operating expenses			Operating ratio	Net from railway operation	Operating income	Net railway operating income, 1932
		Freight	Passenger	Total (inc. misc.)	Way and structures	Equip-ment	Traffic				
Akron, Canton & Youngstown.....	March 171	\$88,663	\$15	\$93,571	\$11,257	\$11,679	\$10,097	87.4	\$11,754	\$548	\$35,750
Alton	3 mos. 171	297,058	65	313,912	31,831	33,632	27,511	73.7	48,968	24,915	77,328
Alton	March 979	765,152	111,727	1,020,694	85,303	130,033	50,704	72.5	280,881	188,167	134,774
Alton	3 mos. 979	2,137,174	386,202	2,888,327	246,621	372,360	141,677	76.7	673,952	361,163	116,616
Alton & Southern.....	March 31	.....	.....	71,113	6,599	5,827	5,044	67.07	23,415	18,569	28,086
Atchison, Topeka & Santa Fe.....	3 mos. 9731	5,464,517	727,226	6,843,677	1,683,111	18,971	14,701	66.83	489,712	57,513	53,347
Atchison, Topeka & Santa Fe.....	March 9735	13,724,715	2,453,970	20,098,974	2,453,151	5,725,823	917,553	92.8	1,559,780	-376,233	906,801
Atchison, Topeka & Santa Fe.....	3 mos. 9735	.....	.....	.....	.....	.....	.....	92.2	1,559,780	-1,050,953	1,860,639
Gulf, Colorado & Santa Fe.....	March 1,955	742,315	26,977	834,856	230,328	243,234	48,965	117.4	-145,586	-231,138	-26,846
Gulf, Colorado & Santa Fe.....	3 mos. 1,955	2,444,321	108,062	2,734,922	719,214	1,134,809	148,031	101.0	-28,428	-287,217	-116,934
Panhandle & Santa Fe.....	March 1,878	524,627	16,347	584,260	159,093	145,416	17,496	95.8	24,452	-18,146	-36,405
Panhandle & Santa Fe.....	3 mos. 1,878	1,557,760	61,168	1,748,030	295,618	440,662	52,941	84.7	267,833	136,952	-104,750
Atlanta & West Point.....	March 93	71,346	13,567	100,439	17,541	24,408	7,220	106.4	-6,421	-15,176	-12,059
Western of Alabama.....	3 mos. 93	189,960	44,916	280,742	52,409	70,818	20,470	109.9	-27,814	-53,536	-65,764
Western of Alabama.....	March 133	78,371	14,168	104,152	20,196	30,503	7,133	100.9	-889	-8,313	-159
Western of Alabama.....	3 mos. 133	213,826	47,956	296,458	55,801	88,282	20,690	104.2	-12,444	-34,721	-34,625
Atlanta, Birmingham & Coast.....	March 639	189,441	2,998	221,075	37,899	39,258	19,524	95.5	10,042	-3,450	-44,964
Atlanta, Birmingham & Coast.....	3 mos. 639	498,818	9,726	590,976	109,509	117,380	56,863	104.6	-27,361	-68,595	-237,457
Atlantic Coast Line.....	March 5,144	3,032,001	626,797	4,015,983	433,401	602,931	111,239	64.3	1,440,218	839,296	389,663
Atlantic Coast Line.....	3 mos. 5,144	8,314,593	1,754,847	11,217,911	1,266,354	1,765,786	343,932	67.2	3,680,180	2,277,189	1,211,813
Charleston & Western Carolina.....	March 342	158,816	818	163,502	17,980	29,761	5,827	67.4	53,246	36,246	35,940
Charleston & Western Carolina.....	3 mos. 342	414,770	2,652	427,903	50,008	69,115	16,697	71.6	121,391	71,322	39,310
Baltimore & Ohio.....	March 6,401	7,324,188	575,156	8,516,370	639,455	1,581,177	332,058	76.2	2,029,831	1,305,204	1,776,606
Baltimore & Ohio.....	3 mos. 6,401	22,409,791	1,793,235	26,016,461	1,853,459	4,611,678	976,498	73.9	6,783,348	4,629,838	4,474,203
Baltimore & Ohio Chic. Term.....	March 84	.....	.....	228,443	19,659	39,565	1,508	91.1	20,241	37,921	120,996
Staten Island Rapid Transit.....	3 mos. 84	.....	.....	716,636	54,067	122,226	4,518	90.4	68,622	8,280	260,711
Staten Island Rapid Transit.....	March 23	49,457	76,763	132,056	5,771	11,841	78,603	82.5	11,219	108,950	13,581
Staten Island Rapid Transit.....	3 mos. 23	152,411	232,775	402,959	20,354	35,678	4,899	81.0	76,625	29,360	-25,871
Bangor & Aroostook.....	March 619	727,259	24,835	774,080	75,843	96,494	3,919	44.4	344,039	357,701	293,079
Belt Ry. Co. of Chicago.....	3 mos. 619	1,853,678	69,149	1,983,507	222,341	266,008	13,212	48.4	1,023,228	839,571	760,837
Belt Ry. Co. of Chicago.....	March 54	.....	.....	270,761	11,287	27,915	2,342	68.3	184,943	85,828	139,947
Belt Ry. Co. of Chicago.....	3 mos. 54	.....	.....	814,486	42,342	90,169	7,929	72.9	220,775	93,313	365,940
Bessemer & Lake Erie.....	March 225	161,010	926	168,567	23,646	196,383	10,038	203.2	-174,036	-198,319	-185,405
Bessemer & Lake Erie.....	3 mos. 225	486,084	2,813	509,319	66,511	492,854	30,759	184.3	-429,337	-494,712	-442,500
Boston & Maine.....	March 2,081	2,165,986	487,987	3,178,676	401,999	498,149	58,229	78.4	686,443	472,204	309,570
Boston & Maine.....	3 mos. 2,081	6,206,675	1,621,915	9,322,942	1,149,138	1,563,644	176,666	79.4	1,924,899	1,287,836	1,668,813
Brooklyn Eastern Dist. Term.....	March 11	70,919	.....	71,013	5,526	18,671	290	56.4	31,079	25,064	28,276
Burlington-Rock Island	3 mos. 11	177,648	.....	180,666	16,471	18,671	740	66.2	60,849	42,121	74,361
Burlington-Rock Island	March 280	52,242	552	52,794	8,374	11,179	3,028	112.3	-6,887	-11,885	-20,440
Burlington-Rock Island	3 mos. 280	179,291	1,697	191,728	29,715	28,334	9,464	101.3	-2,452	-17,719	-49,531
Cambria & Indiana.....	March 37	105,413	.....	105,611	5,430	40,695	11,736	62.02	40,102	24,598	80,453
Canadian Pac. Lines in Maine.....	3 mos. 37	323,310	.....	323,912	15,005	119,831	1,146	60.10	129,254	79,189	232,929
Canadian Pac. Lines in Maine.....	March 233	178,911	15,051	206,895	21,914	31,083	4,177	65.9	70,541	39,015	30,358
Canadian Pac. Lines in Maine.....	3 mos. 233	514,399	45,517	592,588	50,254	107,596	12,757	68.6	185,766	161,766	76,869
Canadian Pac. Lines in Vermont.....	March 85	43,119	9,911	66,180	23,628	16,622	1,876	143.4	-28,723	-34,226	-43,612
Central of Georgia.....	3 mos. 85	107,851	31,029	139,124	40,227	52,469	13,215	144.6	-79,861	-96,364	-131,547
Central of Georgia.....	March 1,944	780,005	81,764	979,117	119,386	195,537	47,271	85.8	139,397	42,631	9,641
Central of Georgia.....	3 mos. 1,944	2,063,133	280,149	2,634,486	314,291	576,913	141,954	91.6	221,106	-68,997	55,587
Central New Jersey.....	March 691	1,788,852	308,591	2,241,301	147,092	386,206	40,584	71.0	650,887	438,369	445,133
Central New Jersey.....	3 mos. 691	5,120,337	1,005,821	6,541,306	439,331	1,161,749	114,598	71.6	1,857,204	1,278,070	1,000,511
Central Vermont	March 457	286,287	32,020	355,791	50,260	79,510	14,019	96.8	11,327	-4,439	26,584
Central Vermont	3 mos. 457	809,867	113,518	1,046,519	143,212	253,815	52,574	97.9	22,331	-24,625	13,857
Chesapeake & Ohio.....	March 3,144	6,686,500	163,300	7,112,421	730,144	1,355,424	154,423	61.3	2,754,075	1,993,283	2,866,022
Chicago & Eastern Illinois.....	3 mos. 3,144	21,418,349	2,620,949	24,269,803	2,620,949	4,212,446	447,202	60.2	9,031,618	6,672,801	7,066,815
Chicago & Eastern Illinois.....	March 938	735,084	61,744	889,923	122,052	127,052	51,546	86.9	116,284	40,821	501
Chicago & Eastern Illinois.....	3 mos. 938	2,405,674	213,353	2,782,023	363,289	443,920	157,352	87.2	357,473	81,344	-304,413

Continued on next left-hand page

USE A GEAR that time has tested

Ten years ago the Franklin Type "E" Power Reverse Gear was created to perform its function with a minimum of parts and at lowest cost. » Time has proved the soundness and economy of the design.



FRANKLIN IS PREPARED TO FURNISH THE TYPE OF GEAR BEST SUITED TO EACH APPLICATION

DESIGN DETAILS

A balanced slide valve is used. Every air man is familiar with this type and understands the little maintenance required. « Crossheads and guides are eliminated, thus reducing weight, number of parts for stock and over-all dimensions. « The piston trunk and front head are proportioned to care for all side and vertical stresses at low unit bearing pressures. The self-adjusting piston rod packing requires no attention between shoppings. « The seal between the Rocker Arm and the Valve Chest is accomplished by a metallic joint. This is an advantage over soft packing.

Specify Franklin Type "E"—the time-tested Power Reverse Gear that has proved its economy on thousands of locomotives.

§

FRANKLIN RAILWAY SUPPLY COMPANY, INC.

NEW YORK

CHICAGO

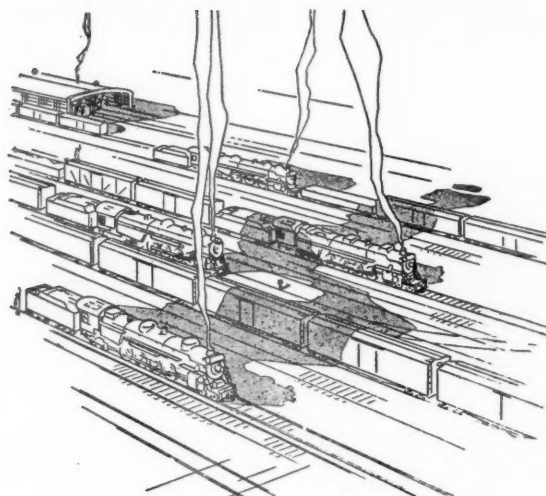
MONTREAL

Revenues and Expenses of Railways

MONTH OF MARCH AND THREE MONTHS OF CALENDAR YEAR 1933—CONTINUED

Name of road	Av. mileage operated during period	Operating revenues				Operating expenses				Operating ratio	Net from operation	Operating income	Net railway operating income 1932	Net ry. operating income, 1932
		Freight	Passenger	Total	(inc. misc.)	Way and structures	Maintenance of equipment	Traffic	Trans- portation	General	Total			
Chicago & Illinois Midland.....	March 131	\$275,762	\$732	\$284,607	\$4,634	\$18,660	\$64,298	\$18,660	\$64,298	\$18,660	\$161,266	\$113,341	\$113,341	\$177,958
Chicago & North Western.....	March 131	670,015	3,615	673,630	13,874	49,111	179,940	49,111	179,940	44,900	486,438	208,216	186,357	301,003
Chicago & North Western.....	March 8,442	3,725,238	536,067	4,261,305	13,338	1,343,878	1,402,252	2,282,837	2,282,837	271,164	4,556,343	293,353	364,641	227,338
Chicago & North Western.....	March 8,442	10,874,759	1,775,844	12,650,603	14,350,511	1,411,661	3,815,230	424,525	6,754,523	797,433	13,285,896	1,064,615	1,463,245	135,242
Chicago, Burlington & Quincy.....	March 9,248	4,193,871	357,462	4,551,333	5,166,697	412,227	957,878	183,261	2,159,666	285,665	4,033,604	1,133,093	169,725	1,476,196
Chicago, Burlington & Quincy.....	March 9,248	12,380,272	1,229,237	13,609,509	15,435,888	1,229,237	2,783,215	552,206	6,554,578	855,085	12,134,724	3,301,164	422,882	3,107,938
Chicago Great Western.....	March 1,499	868,465	27,632	896,097	1,541,613	154,513	169,268	51,008	432,926	48,590	854,308	111,711	122,893	184,464
Chicago Great Western.....	March 1,499	2,584,431	100,469	2,684,900	2,893,016	461,442	497,708	150,768	1,315,447	142,972	2,567,707	335,309	404,915	232,549
Chicago, Indianapolis & Louisville.....	March 11,242	4,908,978	282,814	5,191,792	5,800,009	536,242	1,401,048	187,655	2,500,862	267,520	4,915,867	884,142	205,232	309,761
Chicago, Indianapolis & Louisville.....	March 11,242	14,309,050	972,225	15,281,275	17,043,685	1,617,422	4,000,176	597,288	7,582,993	796,963	14,677,539	2,366,146	868,792	7,176
Chicago River & Indiana.....	March 20	.....	.....	320,452	10,000	20,000	20,000	1,370	105,286	11,061	147,717	172,735	199,345	205,226
Chicago River & Indiana.....	March 20	3,540,291	345,751	3,886,042	4,443,162	36,500	60,000	4,279	328,417	33,546	462,742	499,473	585,377	636,118
Chicago, Rock Island & Pacific.....	March 7,611	10,761,195	1,165,502	11,926,697	13,272,538	1,256,688	2,981,857	169,323	1,995,348	286,603	3,850,504	492,658	265,614	506,018
Chicago, Rock Island & Pacific.....	March 7,611	2,231,481	287,067	2,518,548	2,739,586	287,012	477,424	529,449	6,108,169	794,361	11,834,116	1,438,422	816,451	647,210
Chicago, Rock Island & Gulf.....	March 721	225,748	16,264	242,012	26,686	33,898	33,898	14,426	94,077	17,389	188,546	57,673	36,169	70,651
Chic., St. Paul, Minn. & Omaha.....	March 721	721,140	57,459	778,599	86,961	98,124	98,124	46,708	290,657	55,367	584,434	115,659	93,516	208,913
Chic., St. Paul, Minn. & Omaha.....	March 1,736	738,376	86,151	824,527	95,651	160,163	160,163	31,242	518,494	160,359	879,124	23,170	113,621	22,870
Chic., St. Paul, Minn. & Omaha.....	March 1,736	2,231,481	287,067	2,518,548	2,739,586	287,012	477,424	529,449	6,108,169	794,361	11,834,116	1,438,422	816,451	647,210
Clinchfield R. R.....	March 309	363,130	1,585	364,715	33,600	79,858	79,858	15,710	64,462	12,691	206,321	162,670	117,370	106,042
Clinchfield R. R.....	March 309	1,114,102	5,657	1,119,759	99,797	241,245	241,245	45,559	198,014	40,003	624,618	509,086	376,735	239,932
Colorado & Southern.....	March 1,030	312,008	17,436	329,444	46,559	93,743	93,743	11,543	163,950	31,534	245,484	24,408	50,762	19,590
Colorado & Southern.....	March 1,030	940,226	57,804	998,030	1,120,848	104,680	267,780	35,907	496,362	94,008	996,440	124,408	45,367	23,283
Ft. Worth & Denver City.....	March 804	285,177	23,710	308,887	62,044	14,390	126,065	14,390	126,065	33,671	263,176	107,838	48,695	107,046
Ft. Worth & Denver City.....	March 804	825,503	82,918	908,421	75,811	196,298	196,298	44,637	380,728	96,438	796,314	338,343	189,204	333,982
Columbus & Greenville.....	March 167	43,454	2,241	45,695	13,083	9,108	9,108	2,938	23,214	8,295	56,638	6,598	6,320	3,670
Columbus & Greenville.....	March 167	121,398	8,241	129,639	38,759	29,131	29,131	7,922	14,601	24,905	171,420	28,336	29,043	11,136
Conemaugh & Black Lick.....	March 20	13,058	.....	13,058	4,329	7,366	7,366	250	14,601	2,818	29,364	2,434	1,500	2,387
Conemaugh & Black Lick.....	March 20	35,022	.....	35,022	11,156	18,929	18,929	833	40,596	6,591	78,105	2,740	3,640	4,805
Delaware & Hudson.....	March 854	1,448,975	74,493	1,523,468	1,626,971	261,605	525,867	48,012	743,090	134,287	1,709,770	82,799	163,605	81,734
Delaware & Hudson.....	March 854	4,306,143	249,211	4,555,354	4,850,462	810,841	1,506,488	142,661	2,279,456	406,433	5,142,980	292,518	481,764	125,351
Delaware, Lackawanna & Western.....	March 998	2,492,245	493,714	2,985,959	3,460,489	265,097	747,283	105,634	1,631,952	158,544	2,935,030	525,459	55,111	652,572
Delaware, Lackawanna & Western.....	March 998	6,996,070	1,526,052	8,522,122	773,420	2,260,919	2,260,919	323,998	4,740,769	469,355	8,643,671	1,250,269	61,347	1,383,184
Denver & Rio Grande Western.....	March 2,513	941,482	42,751	984,233	1,056,583	110,651	307,472	42,591	382,126	72,633	918,615	137,968	15,870	60,069
Denver & Rio Grande Western.....	March 2,513	2,939,063	142,411	3,081,474	3,286,371	348,499	859,024	132,630	1,212,333	220,577	2,783,002	503,369	126,276	185,261
Denver & Salt Lake.....	March 232	66,162	5,061	71,223	16,503	22,334	22,334	1,604	20,278	10,963	71,682	9,079	2,320	50,346
Denver & Salt Lake.....	March 232	296,375	14,063	310,438	45,808	67,924	67,924	4,607	69,586	33,054	121,386	119,054	91,535	249,104
Detroit & Mackinac.....	March 242	32,798	1,527	34,325	40,343	6,414	6,414	1,008	21,323	3,510	39,490	853	4,732	3,340
Detroit & Mackinac.....	March 242	84,457	5,643	90,100	106,069	21,389	19,081	3,200	63,834	10,246	117,750	11,681	28,982	14,490
Detroit & Toledo Shore Line.....	March 50	181,170	.....	181,170	15,035	20,595	20,595	6,150	53,298	8,271	103,349	78,822	23,397	49,467
Detroit & Toledo Shore Line.....	March 50	683,753	.....	683,753	43,929	60,056	60,056	16,898	168,605	23,029	314,887	373,050	176,354	189,210
Detroit Terminal.....	March 19	.....	.....	.....	3,826	7,280	7,280	.....	30,321	2,562	43,989	4,789	9,852	7,474
Detroit Terminal.....	March 19	.....	.....	.....	153,116	22,657	22,657	.....	86,932	7,971	129,137	23,979	21,275	1,743
Detroit, Toledo & Ironton.....	March 472	261,755	219	261,974	18,978	45,252	45,252	9,623	77,292	17,523	167,834	101,329	75,955	53,958
Detroit, Toledo & Ironton.....	March 472	886,445	694	887,139	70,639	149,608	149,608	27,791	256,151	56,988	548,316	362,672	211,324	114,910
Duluth, Missabe & Northern.....	March 563	37,574	1,119	38,693	73,034	119,612	119,612	2,746	112,433	39,627	347,452	300,453	300,543	369,059
Duluth, Missabe & Northern.....	March 563	123,362	3,037	126,399	163,925	214,208	402,598	8,752	332,395	119,362	1,077,315	913,390	933,839	1,138,120
Duluth, Winnipeg & Pacific.....	March 178	46,546	1,078	47,624	14,926	22,893	22,893	2,243	33,003	4,184	77,220	27,030	11,311	6,460
Duluth, Winnipeg & Pacific.....	March 178	148,852	4,162	153,014	161,074	69,546	69,546	6,865	100,664	12,549	236,083	146,6	24,467	39,328
Elgin, Joliet & Eastern.....	March 446	530,523	.....	530,523	560,737	150,819	150,819	11,398	252,352	42,081	520,909	39,828	60,796	35,914
Elgin, Joliet & Eastern.....	March 446	1,610,723	.....	1,610,723	200,229	444,913	444,913	34,764	774,603	141,416	1,595,918	115,155	186,921	112,856
Erie Railroad.....	March 2,046	3,840,542	386,385	4,226,927	4,640,054	400,601	1,093,351	131,713	1,837,097	236,976	3,709,774	930,280	516,974	936,334
Erie Railroad.....	March 2,046	11,304,675	1,226,814	12,531,489	13,702,806	1,202,037	3,170,487	709,321	5,456,778	709,321	10,956,802	2,746,004	1,425,043	2,018,677
Chicago & Erie.....	March 269	524,346	1,422	525,768	58,466	78,701	78,701	21,835	191,437	38,466	383,935	191,082	155,193	62,978
Chicago & Erie.....	March 269	1,729,228	38,468	1,767,696	1,875,622	177,218	267,276	67,009	572,444	99,218	1,882,887	696,735	25,908	47,116

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IMPROVED OPERATION Is Working Arches Intensively

Pushing up train speeds and increasing train loading have resulted in the last twelve years in a 75% increase in gross ton miles per freight train hour. This has had its effect on the locomotive firebox.

Temperatures have steadily risen, coal has been fed faster to make more steam

and the vibration and shock of high speed operation have had a destructive influence on fire brick.

In spite of these increasingly adverse conditions, the locomotive Arch is performing exceptionally well, thanks to the continuous research and development of the American Arch Company.

THERE'S MORE TO SECURITY



ARCHES THAN JUST BRICK

**HARBISON-WALKER
REFRACTORIES CO.**
Refractory Specialists



AMERICAN ARCH CO.
INCORPORATED
Locomotive Combustion
Specialists

Revenues and Expenses of Railways

MONTH OF MARCH AND THREE MONTHS OF CALENDAR YEAR 1933—CONTINUED

Name of road	Av. mileage operated during period	Operating revenues			Maintenance of—			Operating expenses			Operating ratio	Net from railway operation	Operating income	Net railway operating income	Net ry. operating income, 1932
		Freight	Passenger	Total (inc. misc.)	Way and structures	Equipment	Traffic	Trans- portation	General	Total					
New Jersey & New York.....	March 45	\$15,770	\$63,487	\$80,975	\$7,846	\$23,539	\$1,442	\$50,064	\$3,759	\$86,650	107.0	—\$5,675	—\$10,681	—\$28,829	—\$18,829
N. Y., Susquehanna & Western.....	March 45	46,022	200,097	250,962	31,291	49,155	4,261	18,022	10,350	253,084	101.6	—4,722	—19,141	—7,481	—65,694
.....	March 131	226,931	26,179	267,909	20,211	46,913	4,991	108,074	11,041	191,133	71.3	7,676	46,591	3,148	15,216
.....	March 131	667,382	81,787	792,546	67,112	144,577	13,082	327,550	31,607	585,228	73.7	208,818	117,600	72,543	36,875
Florida East Coast.....	March 839	619,760	277,569	992,175	98,297	129,021	21,441	206,430	39,376	501,713	50.6	490,462	415,160	362,594	296,067
Fort Smith & Western.....	March 839	1,700,514	726,202	2,688,360	129,829	409,337	64,211	599,635	118,028	1,508,575	56.1	1,179,785	994,045	818,796	771,088
.....	March 249	46,263	650	50,600	13,117	9,545	4,092	17,953	1,878	48,722	96.3	7,425	—722	—4,484	—14,031
.....	March 249	144,943	2,470	159,435	37,922	31,420	13,056	56,555	12,608	152,010	95.3	7,425	—378	—7,292	—18,870
Galveston Wharf.....	March 11	.....	.....	97,015	31,069	2,977	2,708	17,386	5,114	62,999	64.9	34,016	13,976	14,065	23,546
Georgia R. R.....	March 329	221,781	10,633	250,104	268,169	10,173	8,699	54,603	19,031	200,402	74.7	67,767	7,790	7,790	130,080
.....	March 329	606,371	33,719	693,455	30,714	46,843	16,835	115,882	12,476	222,441	88.9	27,663	21,597	27,281	18,509
.....	March 329	.....	.....	.....	82,605	133,032	47,990	324,902	37,453	626,341	90.3	67,114	48,712	68,016	—8,720
Georgia & Florida.....	March 463	75,611	784	80,843	17,834	13,755	8,311	31,948	6,524	78,552	97.2	2,291	—2,709	—6,430	—13,938
Grand Trunk Western.....	March 463	173,333	2,387	188,799	48,235	39,640	24,754	91,245	19,031	200,402	74.7	67,767	7,790	7,790	130,080
.....	March 1,002	961,146	36,147	1,085,180	148,595	247,795	34,605	532,335	75,846	1,043,179	96.1	42,001	58,102	167,985	—77,067
.....	March 1,002	3,048,382	137,685	3,444,229	430,127	793,011	105,886	1,626,192	225,817	3,188,236	92.6	255,993	46,226	369,930	—413,923
Canadian Nat'l Lines in New Eng. March 172	.....	59,359	7,185	74,341	14,168	21,741	2,922	47,850	7,916	96,512	129.8	—22,171	—36,305	—71,642	—99,726
.....	March 172	202,308	22,402	255,429	48,091	53,529	8,993	154,714	25,469	297,495	116.4	—42,066	—84,460	—190,191	—270,284
.....	March 8,455	3,199,549	180,121	3,779,304	295,580	864,975	151,050	1,637,686	190,120	3,175,326	84.0	603,978	29,481	168,458	—48,975
.....	March 8,455	8,659,151	672,479	10,489,095	1,029,030	2,644,568	451,969	4,885,086	565,664	9,657,548	92.1	831,547	—761,710	—1,325,366	—1,324,933
Green Bay & Western.....	March 234	75,180	786	79,284	15,950	11,695	3,591	39,266	2,526	72,993	92.0	6,291	291	—901	9,497
.....	March 234	235,209	2,688	245,767	48,663	33,817	12,613	116,313	7,600	218,784	89.0	26,983	8,963	5,180	4,610
.....	March 307	88,767	5,387	106,161	8,602	14,152	2,134	46,707	3,549	75,303	70.9	30,858	12,649	640	—5,578
.....	March 307	226,493	19,793	276,362	28,915	55,225	6,476	128,976	12,088	232,976	84.3	43,386	—12,901	—50,111	—64,266
Gulf, Mobile & Northern.....	March 733	224,486	7,537	247,350	28,180	42,554	18,477	75,937	11,126	176,274	93.71	71,076	50,067	28,685	—16,213
.....	March 733	617,750	23,312	683,946	93,224	117,872	57,151	251,801	44,841	564,920	82.59	119,054	56,020	—5,366	—92,369
.....	March 5,014	4,330,016	486,069	5,270,015	306,942	1,107,027	148,691	2,171,736	183,767	3,944,999	74.9	1,323,016	853,147	696,099	1,365,460
.....	March 5,014	13,630,016	1,628,381	16,523,087	1,070,067	3,733,032	491,520	6,627,550	843,395	12,850,192	77.8	3,672,895	2,219,195	1,881,492	3,303,045
Yazoo & Mississippi Valley.....	March 1,673	734,559	38,368	832,233	45,444	123,106	21,246	368,604	25,966	584,902	70.3	247,331	118,117	26,140	105,243
.....	March 1,673	2,170,264	143,664	2,503,568	165,580	411,820	65,390	1,134,360	119,338	1,898,167	75.8	605,401	215,769	—75,450	6,525
.....	March 6,687	5,064,272	524,437	6,102,248	352,386	1,230,133	169,937	2,540,340	262,733	4,529,901	74.2	1,572,347	971,264	722,239	1,470,713
.....	March 6,687	15,800,280	1,772,045	19,026,655	1,235,647	4,144,852	556,910	7,761,910	969,733	14,748,359	77.5	4,278,296	2,434,964	1,806,042	3,309,570
Illinois Terminal.....	March 540	278,204	42,292	332,723	31,281	47,383	14,671	138,894	17,201	249,366	74.95	83,357	59,679	31,526	70,561
.....	March 543	823,930	139,175	999,263	98,837	146,914	43,772	419,691	49,931	758,992	75.96	240,271	169,439	88,979	165,508
.....	March 783	543,834	10,657	626,400	55,106	112,331	38,852	207,093	58,799	484,433	77.3	141,967	65,601	41,503	28,189
.....	March 783	1,651,188	35,860	1,906,880	192,825	342,601	114,088	641,979	170,352	1,467,024	76.9	439,856	210,590	164,089	279,017
Texas & Ft. Smith.....	March 98	55,069	843	68,999	9,087	5,406	5,265	24,592	7,945	53,012	76.8	15,987	8,375	—11,082	18,536
.....	March 98	166,029	2,578	199,134	24,539	16,590	15,269	76,949	23,359	159,664	80.2	39,470	16,630	—35,423	—13,990
.....	March 326	113,863	253	116,478	13,711	10,643	6,588	33,350	7,691	71,953	61.8	44,525	29,087	17,152	39,878
.....	March 326	374,274	822	382,996	30,279	35,307	20,013	100,240	22,919	208,500	54.4	174,486	129,606	92,925	107,689
Lake Superior & Ishpeming.....	March 160	21,835	59	23,170	15,471	12,347	495	15,497	5,618	49,428	213.3	—26,258	—38,775	—39,609	—40,989
.....	March 160	62,745	248	67,377	43,580	37,536	1,445	45,584	16,686	145,201	215.5	—77,824	—115,373	—117,938	—130,702
.....	March 12	.....	.....	24,179	3,251	3,738	.....	13,592	2,379	22,940	94.9	1,239	—1,594	—2,388	—6,353
.....	March 12	.....	.....	69,795	7,381	11,576	.....	39,859	7,572	66,388	95.1	3,407	—5,092	—7,197	—18,896
Lehigh & Hudson River.....	March 96	103,373	241	111,311	9,413	21,460	3,208	40,372	6,538	80,991	72.8	30,320	19,081	6,706	16,445
.....	March 96	309,980	862	333,668	28,836	57,939	9,370	121,070	19,477	236,692	70.9	96,976	61,653	27,551	9,860
.....	March 228	240,963	441	243,154	30,119	40,179	5,657	84,462	18,351	178,768	73.5	64,386	56,308	65,767	96,015
.....	March 228	669,112	1,287	676,830	75,317	152,305	15,428	275,459	50,557	569,057	84.1	107,773	86,884	116,275	204,277
Lehigh Valley.....	March 1,359	2,570,935	155,819	2,976,491	179,812	593,761	106,008	1,347,695	121,169	2,361,061	79.3	615,430	356,437	239,560	402,077
.....	March 1,360	7,429,329	507,617	8,648,578	516,482	1,937,424	320,293	3,944,323	373,882	7,132,723	82.5	1,516,419	734,723	400,951	642,556
.....	March 608	281,330	5,834	308,864	32,392	55,897	18,271	75,117	16,122	197,689	64.0	11,175	80,221	67,478	61,612
.....	March 608	850,736	22,860	938,697	90,900	160,159	56,555	236,637	48,555	590,657	62.9	348,040	256,375	214,489	165,117
Louisiana, Arkansas & Texas.....	March 255	46,944	168	52,646	16,316	6,578	3,200	24,323	4,324	54,741	103.9	—2,095	—4,183	—14,972	—5,045
.....	March 255	148,123	717	155,123	48,680	12,141	9,762	72,613	12,901	167,097	101.2	—1,975	—8,332	—40,015	—17,006
.....	March 5,166	12,576,158	297,480	14,706,766	1,072,668	3,173,929	173,272	1,818,836	262,641	3,942,438	86.5	3,064,418	2,364,220	2,777,013	708,048
.....	March 5,166	12,576,158	1,013,439	14,706,766	1,072,668	3,173,929	173,272	1,818,836	262,641	3,942,438	86.5	3,064,418	2,364,220	2,777,013	708,048

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No Deadheads

Among

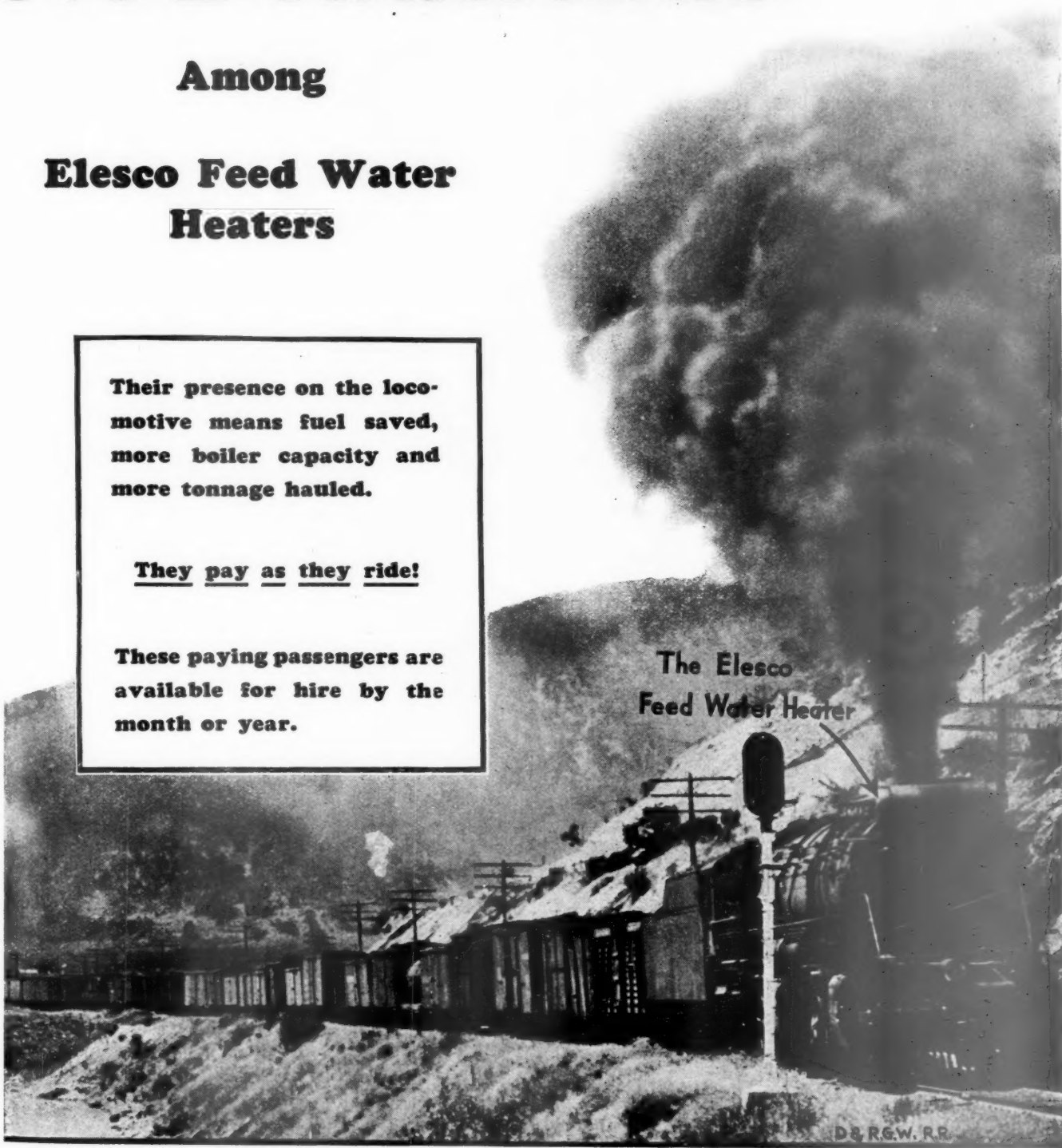
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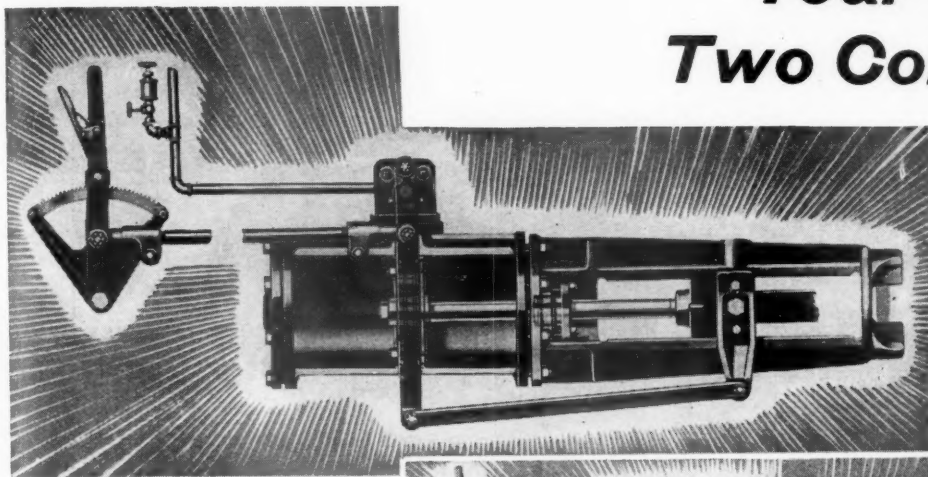
Revenues and Expenses of Railways

MONTH OF MARCH AND THREE MONTHS OF CALENDAR YEAR 1933—CONTINUED

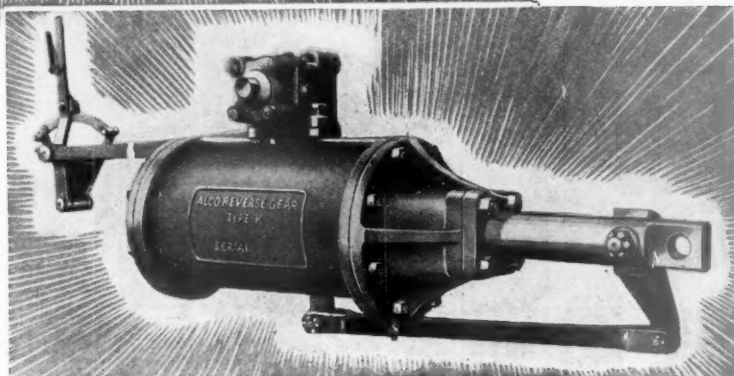
Name of road	Av. mileage operated during period	Operating revenues			Maintenance of—			Operating expenses			Net from railway operation	Operating income	Net railway operating income	Net ry. operating income, 1932
		Freight	Passenger (inc. misc.)	Total	Way and structures	Equip-ment	Traffic	Trans- portation	General	Total				
Maine Central	1,117	\$681,949	\$58,611	\$740,560	\$82,052	\$124,182	\$11,807	\$340,713	\$40,574	\$599,328	\$228,052	\$139,209	\$139,209	\$176,302
Midland Valley	1,117	1,915,465	198,784	2,114,249	235,222	383,232	31,383	1,004,149	113,401	1,808,728	547,999	407,586	290,704	260,575
.....	363	82,613	275	82,888	17,342	2,898	2,336	23,884	2,781	62,114	24,323	14,860	8,268	35,687
.....	363	289,036	1,420	302,099	38,275	26,140	7,387	84,958	20,891	177,654	124,475	96,113	73,566	94,526
Minneapolis & St. Louis	1,627	479,636	12,025	528,706	56,870	132,161	27,553	289,165	36,426	541,835	131,129	49,197	69,892	32,717
.....	1,627	1,380,322	39,085	1,529,032	139,457	415,195	85,527	862,928	111,397	1,610,641	81,609	195,234	260,143	125,642
.....	4,337	1,200,653	55,214	1,391,764	225,150	370,000	58,895	733,325	104,886	1,491,168	99,404	232,115	360,949	306,229
.....	4,337	3,468,987	198,253	4,038,171	652,729	1,066,102	178,730	2,180,128	320,905	4,402,744	364,573	815,715	1,198,592	1,219,325
Duluth, South Shore & Atlantic	563	107,068	6,927	125,543	27,311	30,905	5,142	68,824	5,920	138,167	12,624	29,387	35,383	33,633
.....	560	302,418	27,471	362,862	74,409	96,352	17,618	201,378	18,825	410,668	47,806	120,010	129,067	146,724
.....	163	23,886	1,655	28,229	32,717	4,613	1,667	18,858	4,050	42,905	13,976	18,828	20,248	22,183
.....	163	69,257	4,988	84,264	13,735	12,058	6,151	57,497	12,500	120,941	36,677	51,216	56,340	54,276
Mississippi Central	150	40,962	759	43,409	5,484	9,344	5,644	15,566	5,039	41,077	2,332	537	2,297	6,119
.....	150	110,337	2,642	118,217	17,824	27,117	17,824	46,341	15,500	122,390	103.5	11,336	21,016	44,011
.....	364	63,515	715	68,716	14,370	9,249	5,183	25,359	5,086	59,247	9,473	6,978	1,092	11,300
.....	364	146,700	2,662	164,410	43,966	26,391	17,431	74,658	16,784	179,230	14,830	22,297	43,663	29,698
Missouri-Illinois	202	58,145	289	60,092	10,189	10,748	2,993	21,401	5,597	50,928	84.8	2,336	7,115	8,264
.....	202	176,879	1,053	182,515	36,237	44,657	7,467	66,401	16,450	171,151	11,364	6,119	28,378	6,167
.....	3,293	1,356,928	104,631	1,652,519	259,386	291,246	96,156	710,754	139,317	1,507,817	144,702	44,364	207,516	72,888
.....	3,293	4,143,612	410,631	5,119,220	782,977	856,808	316,362	2,157,051	413,560	4,564,190	555,030	30,177	513,891	425,739
Missouri Pacific	7,412	3,938,324	243,486	4,624,681	523,724	954,341	208,705	1,921,257	263,204	3,892,015	84.2	732,666	381,229	80,632
.....	7,412	12,172,411	849,924	14,349,526	1,465,790	2,897,475	624,883	5,907,419	792,389	11,719,198	81.7	2,630,328	1,501,443	583,341
.....	1,800	620,077	23,853	682,284	95,279	121,382	39,669	246,617	47,993	551,116	80.78	131,146	80,160	14,415
.....	1,804	1,989,782	87,561	2,193,598	271,269	365,326	117,055	723,577	145,902	1,612,153	73.49	581,446	430,582	129,527
International-Great Northern	1,159	924,152	38,452	1,040,346	109,773	141,019	26,758	377,812	47,879	710,462	68.29	329,884	292,326	152,784
.....	1,159	2,317,963	137,971	2,695,759	291,630	415,847	79,957	1,053,882	139,167	2,004,624	74.36	691,135	579,046	264,297
.....	316	57,993	2,585	65,157	14,979	10,016	4,055	16,354	4,789	55,193	81.0	11,964	7,838	14,265
.....	316	168,546	9,930	192,334	44,303	33,443	12,072	52,643	13,549	155,725	81.0	36,609	24,831	43,762
Mobile & Ohio	1,239	532,265	15,191	580,177	64,727	100,893	40,354	240,406	35,432	480,678	92.9	99,499	58,465	2,837
.....	1,239	1,842,733	47,939	1,629,362	220,677	342,521	111,494	719,151	109,836	1,507,107	92.5	122,232	701	160,337
.....	177	242,656	14,587	244,644	27,767	22,485	915	55,839	7,352	104,358	42.7	140,286	126,836	59,165
.....	177	727,570	1,972	734,339	50,079	66,613	2,900	170,071	23,319	313,000	42.6	421,339	388,412	189,482
Monongahela Connecting	6	.....	37,941	7,432	12,742	12,742	45	23,816	2,692	46,727	123.2	8,786	13,579	12,919
.....	6	.....	102,583	25,222	40,752	40,752	135	73,399	7,860	147,368	143.7	44,785	59,213	37,029
.....	57	101,112	.....	101,827	28,162	28,162	1,221	24,618	6,513	69,594	68.3	29,527	43,916	67,981
.....	57	313,203	.....	316,940	25,080	28,254	3,630	80,056	21,577	212,385	67.1	104,355	96,157	150,482
Nashville, Chattanooga & St. Louis	1,203	816,769	53,188	965,760	147,286	229,658	55,096	383,172	53,637	871,934	90.3	93,826	60,776	45,381
.....	1,203	2,295,473	186,689	2,788,482	392,787	636,017	167,304	1,129,290	164,601	2,503,081	89.8	285,401	186,252	143,045
.....	165	13,892	1,246	18,981	8,201	4,066	721	7,810	3,477	24,275	127.9	5,294	12,566	8,116
.....	165	42,970	4,570	58,767	25,914	12,560	2,244	23,853	10,087	74,658	127.0	15,891	38,289	25,272
Newburgh & South Shore	6	.....	43,114	4,002	20,061	20,061	.....	25,095	5,229	54,387	126.2	11,273	20,037	16,959
.....	6	.....	131,936	12,675	57,547	57,547	.....	73,629	14,924	158,775	120.4	26,881	53,170	46,424
.....	262	132,740	4,878	141,341	10,889	13,745	11,315	33,911	6,752	76,612	54.2	64,729	54,826	30,491
.....	262	356,590	17,184	385,198	30,084	45,358	34,121	113,047	20,136	242,746	63.0	142,452	112,737	47,779
New Orleans Terminal	20	2,535	.....	106,802	6,948	5,601	.....	25,582	967	39,098	36.6	67,704	55,806	44,317
.....	20	2,997	.....	335,638	22,429	15,998	.....	75,974	3,267	117,668	35.1	217,970	182,307	136,736
.....	11,443	13,807,621	3,249,195	19,838,226	1,631,159	4,103,544	432,323	8,012,164	1,003,890	15,436,854	77.9	4,381,372	1,970,560	918,533
.....	11,443	42,814,797	11,323,142	62,189,516	5,213,597	12,880,051	1,370,925	24,640,580	3,027,423	47,987,258	77.2	14,202,258	6,895,405	3,395,261
Indiana Harbor Belt	120	.....	550,412	43,500	45,000	45,000	3,172	229,549	18,871	347,201	63.1	203,211	159,419	119,102
.....	120	.....	1,636,028	130,500	135,000	135,000	9,112	703,590	56,766	1,061,423	64.9	574,605	453,952	302,539
.....	235	772,570	39,001	70,336	329,497	329,497	26,068	340,491	53,114	821,792	97.5	20,938	50,759	37,456
.....	235	2,383,181	125,773	2,596,906	201,269	988,346	71,028	1,023,200	165,447	2,453,955	94.5	142,951	90,942	244,402
New York, Chicago & St. Louis	1,691	2,052,459	40,173	2,176,326	223,110	373,047	97,621	826,528	110,030	1,632,620	75.0	543,701	368,445	146,985
.....	1,691	6,157,417	147,605	6,545,297	561,413	1,152,047	295,065	2,488,029	339,757	4,841,215	74.0	1,704,087	1,174,553	491,115
.....	2,071	2,849,351	1,524,709	5,025,082	576,799	849,586	68,842	2,156,919	228,220	3,929,325	79.5	1,027,257	652,448	157,452
.....	2,070	8,291,640	4,977,056	15,156,923	1,824,906	2,522,763	227,517	6,238,303	711,404	11,884,243	78.2	3,312,680	2,182,801	755,171

Continued on next left-hand page

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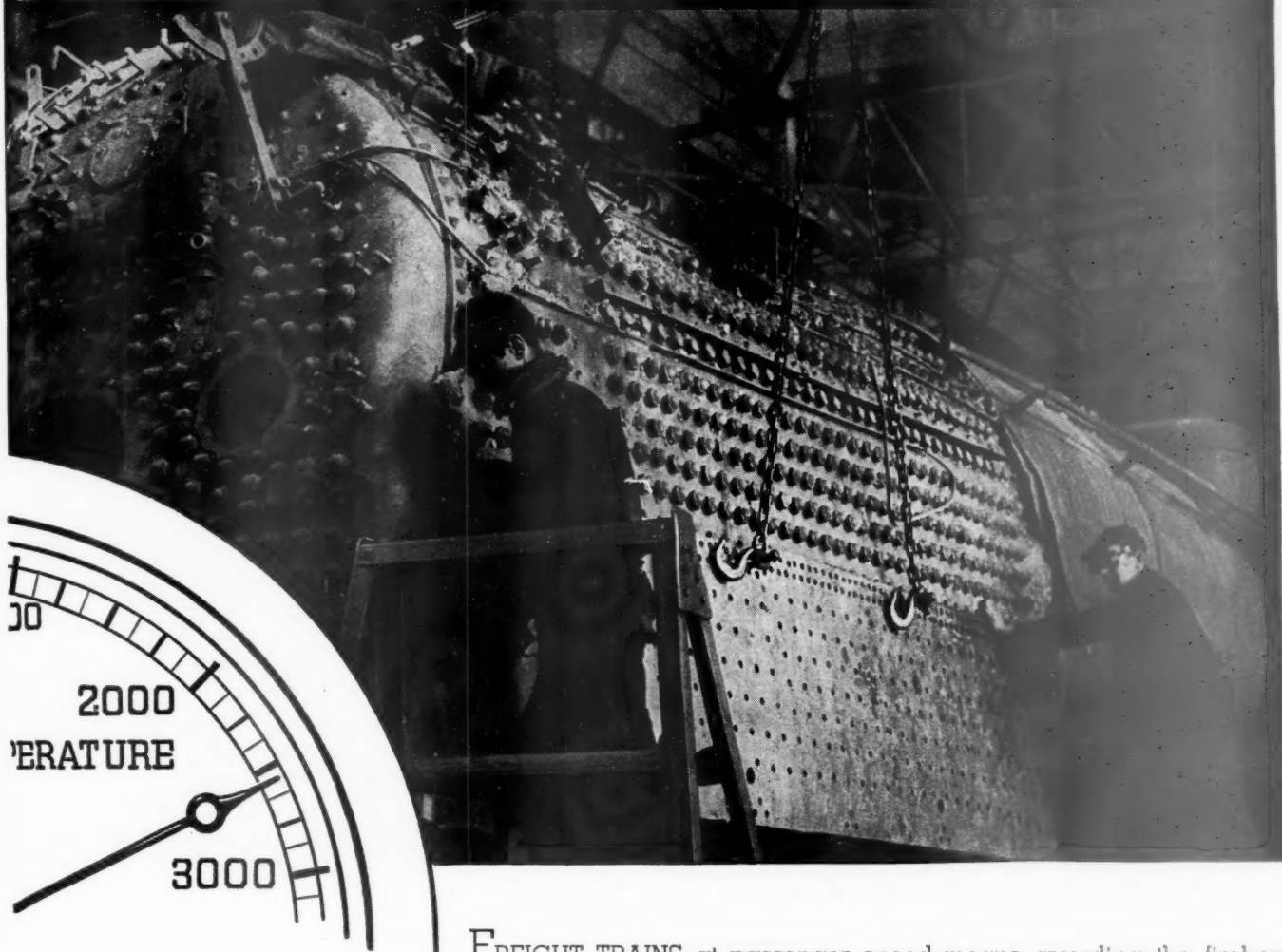
Revenues and Expenses of Railways

MONTH OF MARCH AND THREE MONTHS OF CALENDAR YEAR 1933—CONTINUED

Name of road	Av. mileage operated during period	Operating revenues				Operating expenses				Operating ratio	Net from railway operation	Operating income	Net railway operating income, 1932
		Freight	Passenger	Total (inc. misc.)	Maintenance of— Way and structures	Traffic	Transportation	General	Total				
New York Connecting.....March	20	\$23,065	.....	\$24,500	\$9,495	.....	\$22,777	\$907	\$39,442	16.3	\$203,058	\$172,198	\$93,907
New York, Ontario & Western.....March	20	691,092	.....	717,093	23,705	.....	81,408	2,618	129,539	18.1	587,534	488,114	249,284
New York, Ontario & Western.....March	568	732,732	.....	832,166	156,239	.....	321,375	12,363	1,735,917	71.4	237,700	192,599	213,833
New York, Ontario & Western.....March	568	2,142,708	.....	2,453,466	210,269	36,882	963,642	71,704	1,735,917	70.8	717,549	582,338	448,555
Norfolk & Western.....March	2,233	4,036,560	90,829	4,304,942	511,522	112,824	1,215,228	210,097	3,054,166	71.0	1,250,776	600,515	1,344,130
Norfolk & Western.....March	2,233	13,872,023	299,533	14,674,418	1,494,412	320,553	3,709,966	647,717	9,138,375	62.3	5,536,043	3,584,919	3,091,568
Norfolk Southern.....March	932	282,485	6,241	305,045	69,578	20,790	142,859	22,049	323,437	106.1	—	—	—
Norfolk Southern.....March	932	780,760	17,320	845,712	208,872	60,004	415,879	67,532	946,873	112.0	—	—	—
Norfolk Southern.....March	932	780,760	17,320	845,712	208,872	60,004	415,879	67,532	946,873	112.0	—	—	—
Northern Pacific.....March	6,235	2,536,770	160,230	2,998,130	415,528	153,132	1,383,242	254,628	3,221,333	107.4	—	—	—
Northern Pacific.....March	6,235	6,937,175	531,809	8,368,302	976,808	423,287	4,164,751	770,928	9,279,785	110.9	—	—	—
Northwestern Pacific.....March	407	82,230	63,482	169,202	41,221	4,160	120,483	14,911	219,996	130.0	—	—	—
Northwestern Pacific.....March	424	229,161	196,085	496,884	108,649	13,052	358,861	43,818	654,051	131.6	—	—	—
Oklahoma City-Ada-Atoka.....March	132	26,569	217	28,406	4,438	585	9,828	1,585	18,747	66.0	9,659	6,068	—
Oklahoma City-Ada-Atoka.....March	132	76,632	821	82,132	10,851	1,927	29,911	4,477	52,096	63.4	30,036	19,116	—
Pennsylvania Railroad.....March	10,892	16,520,447	3,826,430	22,940,086	1,939,083	491,744	8,993,020	1,215,726	17,494,759	76.3	5,445,327	3,232,268	2,478,103
Pennsylvania Railroad.....March	10,892	49,832,492	11,984,102	69,338,519	5,755,498	1,564,956	27,245,591	3,787,408	52,872,941	76.3	16,465,578	10,771,229	11,702,976
Long Island.....March	399	504,525	1,142,746	1,751,220	143,810	9,961	876,333	53,992	1,352,311	77.2	398,909	276,950	108,339
Long Island.....March	399	1,420,251	3,768,224	5,088,475	438,125	30,427	2,549,058	162,066	3,986,610	72.4	1,521,908	1,193,557	692,282
Peoria & Pekin Union.....March	18	8,996	.....	8,996	10,408	1,757	31,324	6,892	57,241	86.3	9,109	4,929	15,561
Peoria & Pekin Union.....March	18	27,651	.....	27,651	25,302	5,513	95,227	20,532	167,451	84.8	29,926	—	55,775
Pere Marquette.....March	2,320	1,417,327	31,975	1,528,857	214,263	55,628	690,320	87,759	1,427,983	93.4	100,874	35,464	—
Pittsburg & Shawmut.....March	102	4,573,842	123,500	4,940,805	663,214	170,594	2,069,300	268,582	4,390,082	88.9	550,723	190,861	—
Pittsburg & Shawmut.....March	102	138,261	1,965	142,205	25,255	4,161	46,731	13,732	140,976	99.1	1,229	—	—
Pittsburg & West Virginia.....March	138	151,146	.....	151,146	163,058	11,358	36,530	12,404	130,126	79.8	32,932	9,043	—
Pittsburg & West Virginia.....March	138	37,295	43	37,338	51,529	34,504	105,055	37,896	138,986	82.1	84,847	13,827	—
Pittsburg, Shawmut & Northern.....March	197	66,088	170	66,258	10,121	1,648	25,338	6,666	60,144	86.0	9,747	7,518	—
Pittsburg, Shawmut & Northern.....March	197	198,484	504	207,059	30,263	3,764	78,300	20,276	185,133	89.4	1,926	15,374	—
Reading.....March	1,461	3,367,510	225,310	3,853,584	213,571	65,239	1,531,140	180,629	2,757,707	71.6	1,095,877	879,730	824,008
Reading.....March	1,461	10,005,971	712,111	11,554,916	645,491	208,596	4,558,205	556,492	8,507,319	74.3	2,949,597	2,320,330	2,135,700
Atlantic City.....March	168	67,659	29,513	104,677	21,588	1,837	102,175	4,991	145,694	139.2	—	—	—
Atlantic City.....March	168	207,609	90,249	320,692	63,373	5,584	308,882	13,084	433,958	135.3	—	—	—
Richmond, Fredericksburg & Potomac.....March	117	305,678	149,547	567,966	53,922	8,359	225,363	29,688	427,363	75.2	140,603	111,677	50,724
Rutland.....March	413	867,366	443,160	1,448,552	135,157	23,661	637,498	90,993	1,231,438	74.7	417,074	328,717	163,126
Rutland.....March	413	27,321	255,351	282,672	43,059	9,913	130,069	13,351	236,882	100.6	—	—	—
St. Louis-San Francisco.....March	5,266	2,420,269	149,035	2,569,304	113,518	29,682	366,977	40,156	721,308	97.8	16,569	—	—
St. Louis-San Francisco.....March	5,266	7,281,770	522,515	8,521,967	1,399,389	267,896	3,207,036	417,057	7,482,676	87.8	1,039,291	49,309	—
Ft. Worth & Rio Grande.....March	233	29,953	966	30,249	35,801	2,328	21,165	3,534	56,243	157.1	—	—	—
Ft. Worth & Rio Grande.....March	233	75,829	3,107	79,000	52,673	6,866	63,073	10,544	166,869	179.0	—	—	—
St. Louis, San Francisco & Texas.....March	262	69,157	1,068	73,285	24,466	16,818	32,632	7,541	85,554	116.7	—	—	—
St. Louis, San Francisco & Texas.....March	262	198,394	1,821	200,872	7,754	14,563	99,887	21,928	262,884	125.9	—	—	—
St. Louis Southwestern Lines.....March	1,914	827,153	10,276	881,610	114,154	68,406	321,326	66,995	236,882	82.0	158,439	99,546	—
St. Louis Southwestern Lines.....March	1,914	2,573,533	39,521	2,746,024	332,391	211,250	1,016,616	220,695	2,230,239	81.2	515,785	293,068	—
San Diego & Arizona Eastern.....March	155	38,730	5,114	45,675	8,193	1,841	17,821	4,659	42,967	94.1	2,708	—	—
Seaboard Air Line.....March	4,385	1,443,898	203,809	1,647,707	29,330	5,791	54,325	13,977	132,406	95.4	—	—	—
Seaboard Air Line.....March	4,385	7,043,324	756,356	8,611,529	1,284,331	133,938	1,033,147	133,351	2,391,049	78.4	630,774	390,501	—
Southern Railway.....March	6,653	4,735,209	484,475	5,226,338	627,208	158,365	2,201,961	260,064	4,440,625	77.5	1,285,713	794,424	659,849
Southern Railway.....March	6,653	14,220,957	1,525,547	15,746,504	1,848,940	458,911	6,592,972	735,610	13,185,950	76.6	4,026,542	2,540,445	2,125,234
Alabama Great Southern.....March	315	251,919	23,267	304,232	54,644	9,029	115,339	14,573	268,559	88.3	35,673	772	—
Alabama Great Southern.....March	315	707,041	81,011	866,520	157,899	29,209	349,279	42,293	829,520	95.7	37,000	—	—
Cinn., New Orleans & Tex. Pac.....March	337	718,352	38,776	809,461	110,796	21,034	230,074	34,180	574,437	71.0	235,024	172,717	157,953
Georgia Southern & Florida.....March	397	2,100,622	22,694	2,123,316	293,168	65,370	673,438	106,558	1,705,724	71.0	698,388	530,802	375,559
Georgia Southern & Florida.....March	397	286,955	73,077	360,032	69,392	5,149	128,578	6,617	318,181	77.1	94,759	49,233	—

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MODERN OPERATING CONDITIONS MAKE IT TOUGH FOR THE FIREBOX



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GENERAL OFFICES  YOUNGSTOWN, OHIO

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Revenues and Expenses of Railways

MONTH OF MARCH AND THREE MONTHS OF CALENDAR YEAR 1933—CONTINUED

Name of road	Av. mileage operated during period	Operating revenues			Maintenance of—			Operating expenses			Operating ratio	Net from railway operation		Net ry. operating income, 1932
		Freight	Passenger	Total	Way and structures	Equip-ment	Traffic	Trans-portion	General	Total		Operating income	Net railway operating income	
New Orleans & Northeastern.....	March 204	\$111,217	\$10,730	\$121,947	\$34,637	\$36,904	\$5,115	\$8,858	\$8,431	\$134,480	100.4	\$31,236	\$40,886	\$21,373
3 mos.		295,188	37,778	332,966	83,151	117,931	16,152	17,361	25,381	397,397	108.7	124,216	161,358	99,691
Northern Alabama	March 204	32,443	667	33,110	10,476	11,104	1,633	13,207	5,106	27,222	80.5	2,271	13,878	6,368
3 mos.		112,817	2,628	115,445	26,725	3,484	3,382	41,445	5,106	80,142	67.0	26,004	17,852	20,887
Southern Pacific	March 9,099	4,864,284	1,024,517	5,888,801	700,657	1,295,195	264,485	2,714,499	555,339	5,559,278	86.6	101,189	369,484	177,040
3 mos.		13,817,298	3,416,347	17,233,645	2,271,241	4,029,255	777,290	8,109,685	1,654,145	17,328,000	90.5	1,098,745	1,864,003	118,930
So. Pac. Steamship Lines.....	March 9,101	310,565	325,043	635,608	12,795	101,802	14,383	248,102	20,862	396,144	121.0	69,101	69,593	123,310
3 mos.		816,935	26,876	843,811	39,032	303,910	46,183	693,070	62,767	1,144,962	130.3	271,637	272,033	358,374
Texas & New Orleans.....	March 4,530	1,738,018	160,793	1,898,811	349,387	473,549	110,536	842,427	215,979	2,001,424	93.0	151,404	282,373	152,965
3 mos.		5,059,116	547,259	5,606,375	1,054,292	1,410,051	342,998	2,512,197	655,770	6,004,433	94.7	337,264	379,501	282,427
Spokane, Portland & Seattle.....	March 552	220,418	16,246	236,664	89,273	51,256	5,153	122,671	16,877	227,990	82.3	48,876	27,762	10,195
3 mos.		628,311	55,655	683,966	278,859	146,358	19,365	348,687	55,653	661,915	83.9	103,016	115,537	9,636
Tennessee Central	March 295	136,714	2,774	139,488	26,928	23,417	5,141	55,002	10,057	120,467	81.4	27,594	24,995	17,874
3 mos.		439,175	9,914	449,089	76,062	70,703	15,364	166,773	30,908	359,687	75.4	108,182	61,179	50,245
Terminal R. R. Assn. of St. Louis.....	March 55	.....	.....	.....	460,414	25,823	3,082	17,765	16,016	290,577	63.1	169,837	80,820	129,236
3 mos. ....		.....	.....	.....	1,324,371	85,734	9,714	638,438	15,241	923,263	69.7	401,108	138,737	334,839
Texas & Pacific.....	March 1,950	1,210,876	117,154	1,328,030	170,280	293,026	58,887	522,859	105,373	1,164,959	77.4	339,708	123,598	228,185
3 mos.		3,522,978	404,402	3,927,380	496,664	869,326	182,075	1,524,285	317,351	3,432,270	77.0	1,023,430	386,140	603,863
Texas Mexican	March 162	44,699	516	45,215	9,855	12,633	3,032	23,512	6,413	54,971	111.7	5,756	10,498	1,448
3 mos.		137,320	1,900	139,220	26,892	36,749	8,853	72,022	17,789	162,807	106.6	10,076	23,925	20,688
Toledo, Peoria & Western.....	March 239	111,033	26	111,059	30,322	9,496	13,059	34,426	6,918	94,291	83.7	18,396	15,896	7,950
3 mos.		313,293	85	313,378	69,855	28,907	40,901	98,268	20,988	258,919	81.4	59,042	49,740	16,053
Toledo Terminal	March 28	.....	.....	.....	4,393	8,397	4,388	28,500	3,666	45,394	77.6	1,273	11,924	20,166
3 mos. ....		.....	.....	.....	184,098	26,913	1,362	90,068	12,953	142,838	83.0	17,237	52,597	72,084
Union R. R. of Penna.....	March 45	.....	.....	.....	108,376	22,571	116	69,587	13,037	101,642	176.8	83,266	78,984	38,125
3 mos. ....		.....	.....	.....	340,290	69,204	359	211,531	42,747	578,744	170.1	238,454	224,266	159,891
Union Pacific	March 3,767	3,295,404	271,455	3,566,859	239,175	202,051	102,702	1,359,840	257,874	2,883,716	72.6	1,086,448	656,387	1,100,162
3 mos.		9,255,939	907,611	10,163,550	672,386	2,720,179	296,417	4,079,862	814,512	8,733,361	77.1	2,595,078	1,635,803	2,422,572
Oregon Short Line.....	March 2,504	1,225,656	66,498	1,292,154	113,703	221,697	31,699	491,051	86,754	982,821	69.2	438,262	112,720	223,076
3 mos.		3,455,443	251,952	3,707,395	369,104	661,291	1,339,941	1,339,941	269,803	3,043,741	74.6	1,035,401	314,769	484,445
Oregon-Wash. R. R. & Nav. Co.....	March 2,316	722,609	50,007	772,616	120,495	130,321	45,857	395,528	83,674	779,285	89.2	33,654	108,593	136,148
3 mos.		1,951,577	185,457	2,137,034	346,895	416,458	139,842	1,229,077	255,789	2,401,035	99.1	20,870	648,807	475,009
Los Angeles & Salt Lake.....	March 1,249	870,973	81,819	952,792	128,774	167,301	41,503	340,327	57,300	754,051	74.0	264,576	34,878	127,164
3 mos.		2,570,836	263,614	2,834,450	336,162	530,155	123,852	1,066,232	174,739	2,296,605	75.0	763,581	57,938	301,810
St. Joseph & Grand Island.....	March 258	165,834	1,464	167,298	13,107	23,580	2,191	56,747	11,432	107,057	61.6	66,766	35,831	39,658
3 mos.		463,135	4,321	467,456	35,924	64,102	6,631	172,687	36,314	315,858	64.7	172,151	84,445	100,517
Utah	March 111	80,188	.....	80,188	80,392	21,993	456	17,351	4,875	53,137	66.1	27,255	10,291	5,143
3 mos.		365,651	.....	365,651	368,336	39,178	1,430	73,245	15,220	206,314	56.0	162,022	86,316	80,608
Virginian	March 608	986,940	4,326	991,266	109,708	196,039	16,039	201,327	28,447	531,356	53.1	486,410	421,292	548,478
3 mos.		3,172,092	14,761	3,186,853	314,683	583,381	48,507	629,394	89,826	1,665,005	49.9	1,672,008	1,446,136	1,564,493
Wabash	March 2,480	2,374,059	122,818	2,496,877	348,980	486,286	136,572	1,188,913	137,532	2,305,035	86.1	1,114,604	501,880	345,128
3 mos.		6,954,555	449,513	7,404,068	1,025,770	1,465,639	410,752	3,565,787	401,838	6,811,971	83.0	39,591	20,709	49,131
Ann Arbor	March 293	1,277	1,277	2,554	232,494	45,109	11,345	104,000	10,040	192,903	89.6	10,342	38,571	23,099
3 mos.		622,386	4,898	627,284	70,891	128,016	33,994	315,561	30,423	578,975	85.7	385,227	180,740	129,942
Western Maryland	March 891	883,642	4,803	888,445	150,704	150,878	31,573	247,952	34,430	574,907	62.8	340,766	271,778	293,096
3 mos.		2,639,292	16,579	2,655,871	294,333	482,100	94,471	733,709	102,298	1,716,093	62.8	1,014,630	814,100	922,206
Western Pacific	March 1,210	595,584	10,480	606,064	93,768	151,790	54,520	301,061	37,049	650,936	102.9	18,261	80,640	58,086
3 mos.		1,711,695	32,837	1,744,532	272,129	444,025	164,518	898,090	105,972	1,909,430	105.5	98,994	312,519	391,637
Wheeling & Lake Erie.....	March 511	546,695	1,228	547,923	64,856	189,493	25,101	247,325	24,778	508,551	87.7	71,161	18,146	92,063
3 mos.		1,823,412	4,790	1,828,202	186,994	573,000	78,358	626,284	77,400	1,542,074	79.5	398,624	174,217	195,708
Wichita Falls & Southern.....	March 203	41,711	35	41,746	9,087	6,964	1,722	11,951	3,386	33,110	77.26	7,037	3,708	26,535
3 mos.		115,254	89	115,343	25,350	20,390	4,937	36,434	9,219	96,330	80.68	14,949	5,954	16,391

Railway annual report advertising begins on next left-hand page

—18,146	92,063
113,193	165,708
3,708	26,535
5,954	16,391

71,161	—278
398,624	174,217
9,744	7,037
23,072	14,949

4,778	508,551	87.7
7,400	1,542,070	79.5
3,386	33,110	77.26
9,219	96,330	80.68

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H S G I

Cross Head Shoes

SUPERVISORS of locomotive maintenance frequently comment on the high mileage obtained from HUNT-SPILLER *Air Furnace* GUN IRON Crosshead Shoes.

The savings in crosshead maintenance alone justify application but, they represent only a small part of the total economies effected.

The wear resisting qualities of HUNT-SPILLER *Air Furnace* GUN IRON have proven to be a big factor in the elimination of crosshead pounds and have contributed to the increased mileage from guides, wrist pins, rod bearings, piston packing and many other parts.

Your road will welcome
this increased mileage

HUNT-SPILLER MFG. CORPORATION
J.G. Platt, Pres. & Gen. Mgr. V.W. Ellet, Vice-President.

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383 Dorchester Ave. South Boston, 27, Mass.
Canadian Representative: Joseph Robb & Co., Ltd., 997 Aqueduct St., Montreal, P. Q.
Export Agent for Latin America:
International Rwy. Supply Co., 30 Church Street, New York, N. Y.

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Reg. U. S. Trade Mark
Bushings

Reg. U. S. Trade
Cylinder Bushings
Cylinder Packing Rings
Pistons or Piston Bull Rings
Valve Bushings
Valve Packing Rings

Valve Bushings
Valve Packing Rings
Valve Bull Rings

Valve Packing
Valve Bull Rings
Crosshead Shoes
Liners

Valve
Crosshead Shoes
Hub Liners
Shoes and Wedge
Bush

Hub Liner
Shoes and Wedge
Rotating Rod Bush

Finished

Parts Pa
Application

Parts Application
Dunbar Sectional Type Packing
Duplex Sectional Type Packing
 for Cylinders and Valves
 (Duplex Springs for Above
 Sectional Packing)
 Cylinder Snap Rings
 Valve Rings All Shapes

(Duplicate)
Sectional Packing
Cylinder Snap Rings
Valve Rings All Shapes

Cylinder
Valve Rings All Sharp

Air Furnace

HUNT-SPILLER GUN IRON

Annual Reports

Missouri-Kansas-Texas Railroad Company

and Controlled Companies

Annual Report for the Year Ended December 31, 1932

St. Louis, Mo., April 18, 1933.

TO THE STOCKHOLDERS:

The Board of Directors submit herewith report of the operations and affairs of your property for the year ended December 31, 1932.

CONSOLIDATED INCOME ACCOUNT

Year Ended December 31, 1932, Compared With
Year Ended December 31, 1931

	1932 Amount	1931 Amount	+Increase -Decrease
Average Mileage Operated.	3,293.93	3,241.25	+52.68
OPERATING REVENUES:			
Freight	\$22,151,230.38	\$27,544,230.22	-\$5,392,999.84
Passenger	2,281,146.12	3,417,738.22	-1,136,592.10
Mail	1,092,975.50	1,131,261.97	-38,286.47
Express	696,664.40	1,019,383.37	-322,718.97
Miscellaneous	705,781.01	839,479.69	-133,698.68
Incidental	217,652.07	312,674.39	-95,022.32
Joint Facility	94,377.56	118,611.78	-24,234.22
Total Operating Revenues	\$27,239,827.04	\$34,383,379.64	-\$7,143,552.60
OPERATING EXPENSES:			
Maintenance of Way and Structures	\$3,079,235.55	\$3,980,347.73	-\$901,112.18
Maintenance of Equipment	3,672,340.06	5,250,595.06	-1,578,255.00
Traffic Expenses	1,358,799.99	1,525,083.97	-166,283.98
Transportation Expenses	9,332,466.13	11,685,843.44	-2,353,377.31
Miscellaneous Operations	189,172.43	258,833.83	-69,661.40
General Expenses	1,612,569.51	1,848,040.57	-235,471.06
Transportation for Investment—Cr.	16,678.74	47,345.24	+30,666.50
Total Operating Expenses	\$19,227,904.93	\$24,501,399.36	-\$5,273,494.43
Net Revenue from Railway Operations.	\$8,011,922.11	\$9,881,980.28	-\$1,870,058.17
RAILWAY TAX ACCRUALS			
UNCOLLECTIBLE RAILWAY REVENUES	\$2,222,009.64	\$2,455,586.33	-\$233,576.69
REVENUES	19,187.11	21,044.33	-1,857.22
Total	\$2,241,196.75	\$2,476,630.66	-\$235,433.91
Railway Operating Income	\$5,770,725.36	\$7,405,349.62	-\$1,634,624.26
OTHER OPERATING INCOME:			
Rent from Locomotives	\$16,841.94	\$19,233.35	-\$2,391.41
Rent from Passenger Train Cars	67,057.37	81,478.34	-14,420.97
Rent from Work Equipment	8,765.88	23,981.47	-15,215.59
Joint Facility Rent Income	179,223.65	193,032.77	-13,809.12
Total Other Operating Income	\$271,888.84	\$317,725.93	-\$45,837.09
Total Operating Income	\$6,042,614.20	\$7,723,075.55	-\$1,680,461.35
DEDUCTIONS FROM OPERATING INCOME:			
Hire of Freight Cars—Debit Balance	\$1,217,817.62	\$1,637,922.41	-\$420,104.79
Rent for Locomotives	38,243.83	42,646.61	-4,402.78
Rent for Passenger Train Cars	110,112.99	117,404.53	-7,291.54
Rent for Work Equipment	6,776.85	12,880.92	-6,104.07
Joint Facility Rents	887,238.24	897,136.58	-9,898.34
Total Deductions from Operating Income	\$2,260,189.53	\$2,707,991.05	-\$447,801.52
Net Railway Operating Income	\$3,782,424.67	\$5,015,084.50	-\$1,232,659.83
NON-OPERATING INCOME:			
Income from Lease of Road	\$113,823.17	\$109,063.58	+\$4,759.59
Miscellaneous Rent Income	247,569.59	215,363.65	+32,205.94
Miscellaneous Non-Operating Physical Property	10,709.47	6,310.38	+4,399.09
Dividend Income	1,651.50	16,839.00	-15,187.50
Income from Funded Securities	21,346.80	31,751.21	-10,404.41
Income from Unfunded Securities and Accounts	101,820.34	192,883.47	-91,063.13
Miscellaneous Income	1,389.25	2,430.75	-1,041.50

	1932 Amount	1931 Amount	+Increase -Decrease
Total Non-Operating Income	\$498,310.12	\$574,642.04	-\$76,331.92
Gross Income	\$4,280,734.79	\$5,589,726.54	-\$1,308,991.75
DEDUCTIONS FROM GROSS INCOME:			
Miscellaneous Rents	\$10,131.64	\$1,870.04	+\$8,261.60
Miscellaneous Tax Accruals	12,666.66	10,680.77	+1,985.89
Interest on Unfunded Debt	27,190.39	32,725.05	-5,534.66
Miscellaneous Income Charges	432.12	440.80	8.68
Total Deductions from Gross Income	\$50,420.81	\$45,716.66	+\$4,704.15
Balance Available for Interest	\$4,230,313.98	\$5,544,009.88	-\$1,313,695.90
Fixed Interest Charges	4,183,851.35	4,189,904.87	-6,053.52
Balance Available for Interest on Adjustment Bonds	\$46,462.63	\$1,354,105.01	-\$1,307,642.38
Interest on Adjustment Bonds	678,878.36	678,878.36	
Net Income	\$632,415.73	\$675,226.65	-\$42,810.92

Italics denote debit.

* Depreciation for the years 1932 and 1931 has been provided at reduced rates as compared with previous years.

Financial

There was no change in the amount of preferred or common stock outstanding in the hands of the public during the year.

Long term debt was decreased \$184,100 on account of underlying bonds and equipment notes paid and retired during the year.

Underlying bonds amounting to \$16,000 were exchanged during the year for a similar amount of Prior Lien Series "A" Bonds.

The Interstate Commerce Commission granted our application for authority to charge Profit and Loss with \$1,662,874.82 covering equipment retirements, and \$436,095.08 on account of retirement of the old bridge over the Missouri River at Boonville, Mo.

Operation

Total operating revenues during 1932 were \$7,143,553 less than in 1931, or 20.78 per cent. Operating expenses during 1932 were \$5,273,494 less than in 1931, or 21.52 per cent.

Continued business depression and severe competition from other forms of transportation account for the decline in revenues. Revenues from passengers carried in 1932 were less than in 1931 by \$1,136,592, or 33.26 per cent. Unfavorable market conditions throughout the year adversely affected the movement of agricultural products, particularly cotton, grain, and perishables. The operation of pipe lines had the effect of materially reducing the volume of our gasoline movement in 1932. Severe truck competition was encountered in the movement of most of the carload commodities, as well as merchandise. Large quantities of coal were handled by trucks, particularly within a radius of 100 miles. We are meeting truck competition, as far as possible, with rate reductions, more liberal tariff provisions governing the handling of freight, improved schedules, and intense solicitation. Regulation of truck operations by state authorities, particularly in Texas, has enabled the rail lines to more effectively compete with this form of transportation.

Train operation, both freight and passenger, was satisfactorily maintained during the year. The property is being maintained in good physical condition to meet all requirements of the service.

Additions to Property

The more important road improvements completed during the year were:

New bridge over the Missouri River at Boonville opened in February.

Separation of grades at four crossings of streets and highways.

Replacing 160 feet of timber trestles with permanent structures.

Laying 4 miles of new 90-pound rail replacing 85-pound and 90-pound rail.

Investment in road property decreased \$134,535 during the year.

Expenditures for new equipment amounted to \$116,660 and expenditures for improvement to existing equipment to \$23,584.

[Advertisement]

The amount of equipment retirements for the year, less replacements, was \$2,277,799. There was a net decrease in value of equipment owned amounting to \$2,137,555.

Industrial Development

During the year, 162 new industries, representing an invest-

ment of approximately \$1,840,000, were established on rails of the company. The lack of expansion on the part of industry generally accounts for the relatively small investment involved.

M. H. CAHILL,

President.

Missouri-Kansas-Texas Lines—Consolidated General Balance Sheet

ASSETS				LIABILITIES			
	December 31, 1932	December 31, 1931	+ Increase — Decrease		December 31, 1932	December 31, 1931	+ Increase — Decrease
INVESTMENTS:				STOCK:			
Investment in Road and Equipment:				Capital Stock:			
Road	\$214,358,536.16	\$214,493,071.48	-\$134,535.32	Preferred, Series "A" (par value \$100.00 per share)	\$66,671,000.83	\$66,668,948.12	+\$2,052.71
Equipment	43,314,080.85	45,451,636.14	-2,137,555.29	Common (no par value; see note)	66,672,747.67	66,672,472.93	+274.74
	\$257,672,617.01	\$259,944,707.62	-\$2,272,090.61	Stock Liability for Conversion:			
Deposits in Lieu of Mortgaged Property Sold..	212.50	212.50	.....	Preferred, Series "A" (par value \$100.00 per share)	32,734.78	34,787.49	-2,052.71
Miscellaneous Physical Property	996,423.33	1,182,004.49	-185,581.16	Common (no par value; see note)	16,736.81	17,011.55	-274.74
Investments in Affiliated Companies—Pledged	527,000.00	527,000.00	.....	TOTAL STOCK	\$133,393,220.09	\$133,393,220.09	.....
Investments in Affiliated Companies—Unpledged	1,653,436.88	1,230,290.35	+423,146.53	LONG TERM DEBT:			
Other Investments:				Mortgage Bonds	\$93,094,179.30	\$93,194,179.30	-\$100,000.00
United States Government Securities .....	.....	1,000,078.13	-1,000,078.13	Equipment Trust Obligations	252,300.00	336,400.00	-84,100.00
Other Securities at Cost	*581,794.73	617,433.19	-35,638.46	Income Mortgage Bonds..	13,577,567.24	13,577,567.24	.....
TOTAL INVESTMENTS..	\$261,431,484.45	\$264,501,726.28	-\$3,070,241.83	TOTAL LONG TERM DEBT	\$106,924,046.54	\$107,108,146.54	-\$184,100.00
CURRENT ASSETS:				CURRENT LIABILITIES:			
Cash	\$3,325,064.09	\$2,280,291.32	+\$1,044,772.77	Traffic and Car Service Balances Payable ..	\$481,341.79	\$514,538.62	-\$33,196.83
Time Drafts and Deposits	3,755,064.35	4,116,712.06	-361,647.71	Audited Accounts and Wages Payable	1,967,593.12	2,881,756.26	-914,163.14
Special Deposits	9,444.66	8,609.94	+834.72	Miscellaneous Accounts Payable	94,016.20	90,998.34	+3,017.86
Loans and Bills Receivable:				Interest Matured Unpaid	1,628,828.89	1,625,594.82	+3,234.07
Time Loans .....	.....	501,544.16	-501,544.16	Dividends Matured Unpaid	17,187.00	19,667.75	-2,480.75
Other Bills Receivable..	62,895.02	59,094.91	+3,800.11	Funded Debt Matured Unpaid	2,642.00	1,642.00	+1,000.00
Traffic and Car Service Balances Receivable..	325,902.39	457,922.31	-132,019.92	Unmatured Interest Accrued	452,622.43	455,526.84	-2,904.41
Net Balance Receivable from Agents and Conductors	386,706.17	455,745.04	-69,038.87	Unmatured Rents Accrued	120,222.51	139,233.50	-19,010.99
Miscellaneous Accounts Receivable	808,470.00	912,735.04	-104,265.04	Other Current Liabilities..	83,547.96	119,799.18	-36,251.22
Material and Supplies at Cost	2,998,466.99	3,560,373.58	-561,906.59	TOTAL CURRENT LIABILITIES	\$4,848,001.90	\$5,848,757.31	-\$1,000,755.41
Interest and Dividends Receivable	61,524.98	57,957.63	+3,567.35	DEFERRED LIABILITIES:			
Other Current Assets....	18,100.31	16,525.75	+1,574.56	Other Deferred Liabilities	\$263,706.89	\$342,968.48	-\$79,261.59
TOTAL CURRENT ASSETS	\$11,751,638.96	\$12,427,511.74	-\$675,872.78	UNADJUSTED CREDITS:			
DEFERRED ASSETS:				Tax Liability	\$1,128,659.18	\$1,060,595.43	+\$68,063.75
Working Fund Advances..	\$66,002.78	\$99,871.53	-\$33,868.75	Accrued Depreciation — Road	136,649.49	136,649.49	.....
Other Deferred Assets....	332,769.54	223,063.82	+109,705.72	Accrued Depreciation — Equipment	11,810,546.77	11,577,056.01	+233,490.76
TOTAL DEFERRED ASSETS	\$398,772.32	\$322,935.35	+\$75,836.97	Other Unadjusted Credits	396,394.27	364,323.78	+32,070.49
UNADJUSTED DEBITS:				TOTAL UNADJUSTED CREDITS	\$13,472,249.71	\$13,138,624.71	+\$333,625.00
Rents and Insurance Premiums Paid in Advance	\$23,435.02	\$83,065.07	-\$59,630.05	CORPORATE SURPLUS:			
Other Unadjusted Debits..	219,384.84	448,038.61	-228,653.77	Additions to Property Through Income and Surplus	\$89,131.80	\$78,832.57	+\$10,299.23
TOTAL UNADJUSTED DEBITS	\$242,819.86	\$531,103.68	-\$288,283.82	Profit and Loss—Balance..	*14,834,358.66	17,872,727.35	-3,038,368.69
TOTAL	\$273,824,715.59	\$277,783,277.05	-\$3,958,561.46	TOTAL CORPORATE SURPLUS	\$14,923,490.46	\$17,951,559.92	-\$3,028,069.46
The following Assets not included in Balance Sheet Accounts:				TOTAL	\$273,824,715.59	\$277,783,277.05	-\$3,958,561.46
Securities Issued or Assumed—Unpledged:				The following Liabilities not included in Balance Sheet Accounts:			
Preferred Stock, Series "A"	\$5,528,364.39	\$5,528,364.39	.....	Securities held by or for the Company — Unpledged:			
Common Stock	15,730,515.52	15,730,515.52	.....	Preferred Stock, Series "A"	\$5,528,364.39	\$5,528,364.39	.....
Long Term Debt	11,392,905.46	11,392,905.46	.....	Common Stock	15,730,515.52	15,730,515.52	.....
Securities Issued or Assumed—Pledged:				Long Term Debt	11,392,905.46	11,392,905.46	.....
Long Term Debt	17,545,000.00	17,529,000.00	+\$16,000.00	Securities held by or for the Company—Pledged:			
Long Term Debt Held for Exchange of Underlying Securities, per contra	31,097,000.00	31,113,000.00	-16,000.00	Long Term Debt	17,545,000.00	17,529,000.00	+\$16,000.00

* Approximate value, \$81,794.73.
Intercompany Assets and Liabilities are excluded.

The Company is guarantor, jointly with other companies, of the securities of certain terminal companies, none of which is in default.
As no liability is admitted under Section 15A of the Interstate Commerce Act no cognizance thereof has been taken in preparing the above Balance Sheet.

There are proposed additional assessments in respect to prior years' Federal Income Taxes, liability for which is not admitted by the Company. Dividends on 7% Cumulative Preferred Stock, Series "A," have been declared and paid to September 30, 1931.

* Subject to note under Other Investments, per contra.
There were 808,938.9429 shares Common Stock outstanding in hands of the public December 31, 1932, an increase of 3.3334 shares. There were also 203.0673 shares included in Stock Liability for Conversion on December 31, 1932, a decrease of 3.3334 shares.

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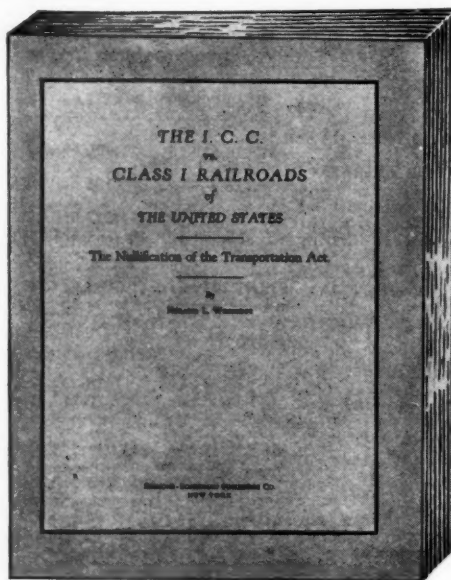
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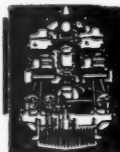
Foreword—Transportation Chart—Petition for Rate Increase of 15%—Transportation Act of 1920—The Supreme Court and "Fair Value" and "Fair Return"—Interstate Commerce Commission Valuations—Honest, Efficient and Economical Management—Passenger Business—Less Than Current Interest on Investment—Opposition to Rate Increase—The Hoch-Smith Resolution—Wages of Railroad Labor—Railroad Rates—Inland Waterways—The Motor Truck—Coordination of Rail and Motor Transportation—Railroad Costs Under Private Ownership—Railroad Credit—Railroad Consolidation—Railroad Executives—The Cost of Government Ownership—Independent Office Appropriation Bill for 1932—How the Taxpayers' Money is Appropriated—The Interstate Commerce Commission Itself—The Taxpayer—The Shipper—Hearings in Connection with Ex Parte 103—The Commission's Decision in the 15% Case—Royal Commission on Transport—Conclusion.

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By Horatio L. Whitridge

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